Luke Air Force Base
Permit Number V97-017
Table of Contents
August 24, 2004

APPENDICES:

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
August 24, 2004

In accordance with Maricopa County Air Pollution Control Rules and Regulations (Rules), Rule 210 § 302.2, all Conditions of this Permit are federally enforceable unless they are identified as being locally enforceable only. However, any Permit Condition identified as locally enforceable only will become federally enforceable if, during the term of this Permit, the underlying requirement becomes a requirement of the Clean Air Act (CAA) or any of the CAA's applicable requirements.

All federally enforceable terms and conditions of this Permit are enforceable by the Administrator of the United States Environmental Protection Agency (Administrator or Administrator of the USEPA hereafter) and citizens under Section 304 of the CAA.

Any cited regulatory paragraphs or section numbers refer to the version of the regulation that was in effect on the first date of public notice of the applicable Permit Condition unless specified otherwise.

GENERAL CONDITIONS:

1. AIR POLLUTION PROHIBITED: [County Rule 100 §301] [SIP Rule 3]

The Permittee shall not discharge from any source whatever into the atmosphere regulated air pollutants which exceed in quantity or concentration that specified and allowed in the County or State Implementation Plan (SIP) Rules, the Arizona Administrative Code (AAC) or the Arizona Revised Statutes (ARS), or which cause damage to property or unreasonably interfere with the comfortable enjoyment of life or property of a substantial part of a community, or obscure visibility, or which in any way degrade the quality of the ambient air below the standards established by the Maricopa County Board of Supervisors or the Director of the Arizona Department of Environmental Quality (ADEQ).

2. CIRCUMVENTION: [County Rule 100 §104] [40 CFR 60.12] [40 CFR 63.4(b)]

The Permittee shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of regulated air pollutants to the atmosphere, conceals or dilutes an emission which would otherwise constitute a violation of this Permit or any Rule or any emission limitation or standard. The Permittee shall not circumvent the requirements concerning dilution of regulated air pollutants by using more emission openings than is considered normal practice by the industry or activity in question.

3. CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS:

[County Rule 100 §401] [County Rule 210 §§301.7, 302.1e(1), 305.1c(1) & 305.1e]

Any application form, report, or compliance certification submitted under the County Rules or these Permit Conditions shall contain certification by a responsible official of truth, accuracy, and completeness of the application form or report as of the time of submittal. This certification and any other certification required under the County Rules or these Permit Conditions shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

4. COMPLIANCE:

A. COMPLIANCE REQUIRED:

1) The Permittee must comply with all conditions of this permit and with all applicable requirements of Arizona air quality statutes and the air quality rules. Compliance with

permit terms and conditions does not relieve, modify, or otherwise affect the Permittee's duty to comply with all applicable requirements of Arizona air quality statutes and the Maricopa County Air Pollution Control Regulations. Any permit non-compliance is grounds for enforcement action; for a permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. Noncompliance with any federally enforceable requirement in this Permit constitutes a violation of the Act. [This Condition is federally enforceable if the condition or requirement itself is federally enforceable and only locally enforceable if the condition or requirement itself is locally enforceable only]

[County Rule 210 §§301.8b(4) & 302.1h(1)]

2) The Permittee shall halt or reduce the permitted activity in order to maintain compliance with applicable requirements of Federal laws, Arizona laws, the County Rules, or other conditions of this Permit.

[County Rule 210 §302.1h(2)]

3) For any major source operating in a nonattainment area for any pollutant(s) for which the source is classified as a major source, the source shall comply with reasonably available control technology (RACT) as defined in County Rule 100.

[County Rule 210 §302.1(h)(6)] [SIP Rule 220 §302.2]

4) For any major source operating in a nonattainment area designated as serious for PM_{10}, for which the source is classified as a major source for PM_{10}, the source shall comply with the best available control technology (BACT), as defined in County Rule 100.

[County Rule 210 §302.1(h)(7)]

B. COMPLIANCE CERTIFICATION REQUIREMENTS: [County Rule 210 §305.1d]

The Permittee shall file an annual compliance certification with the Control Officer and also with the Administrator of the USEPA. The report shall certify compliance with the terms and conditions contained in this Permit, including emission limitations, standards, or work practices. The certification shall be on a form supplied or approved by the Control Officer and shall include each of the following:

1) The identification of each term or condition of the permit that is the basis of the certification;
2) The compliance status;
3) Whether compliance was continuous or intermittent;
4) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
5) Other facts as the Control Officer may require to determine the compliance status of the source.

The annual certification shall be filed at the same time as the second semiannual monitoring report required by the Specific Condition section of these Permit Conditions and every 12 months thereafter.

C. COMPLIANCE PLAN: [County Rule 210 §305.1g]

Based on the certified information contained in the application for this Permit, the facility is in compliance with all applicable requirements in effect as of the first date of public notice of the proposed conditions for this Permit unless a compliance plan is included in the Specific Conditions section of this Permit. The Permittee shall continue to comply with all applicable

requirements and shall meet any applicable requirements that may become effective during the term of this permit on a timely basis. [This Condition is federally enforceable if the applicable requirement itself is federally enforceable and only locally enforceable if the applicable requirement itself is locally enforceable only]

5. CONFIDENTIALITY CLAIMS:

Any records, reports or information obtained from the Permittee under the County Rules or this Permit shall be available to the public, unless the Permittee files a claim of confidentiality in accordance with ARS §49-487(c) which:

A. precisely identifies the information in the permit(s), records, or reports which is considered confidential, and

B. provides sufficient supporting information to allow the Control Officer to evaluate whether such information satisfies the requirements related to trade secrets or, if applicable, how the information, if disclosed, could cause substantial harm to the person's competitive position.

The claim of confidentiality is subject to the determination by the Control Officer as to whether the claim satisfies the claim for trade secrets.

[County Rule 100 §402] [County Rule200 §411]

A claim of confidentiality shall not excuse the Permittee from providing any and all information required or requested by the Control Officer and shall not be a defense for failure to provide such information.

[County Rule 100 §402]

If the Permittee submits information with an application under a claim of confidentiality under ARS §49-487 and County Rule 200, the Permittee shall submit a copy of such information directly to the Administrator of the USEPA.

[County Rule 210 §301.5]

6. CONTINGENT REQUIREMENTS:

NOTE: This Permit Condition covers activities and processes addressed by the CAA which may or may not be present at the facility. This condition is intended to meet the requirements of both Section 504(a) of the 1990 Amendments to the CAA, which requires that Title V permits contain conditions necessary to assure compliance with applicable requirements of the Act as well as the Acid Rain provisions required to be in all Title V permits.

A. ACID RAIN: [County Rule 210 §§302.1b(2) & 302.1f] [County Rule 371 §301]

1). Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the CAA and incorporated under County Rule 371, both provisions shall be incorporated into this Permit and shall be enforceable by the Administrator.

2) The Permittee shall not allow emissions exceeding any allowances that the source lawfully holds under Title IV of the CAA or the regulations promulgated thereunder and incorporated under County Rule 371.

a) No permit revision shall be required for increases in emissions that are authorized by allowances acquired under the acid rain program and incorporated under County Rule 371, provided that such increases do not require a permit revision under any other applicable requirement.

b) No limit is placed on the number of allowances held by the Permittee. The Permittee may not, however, use allowances as a defense to non-compliance with any other applicable requirement.

c) Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the CAA.

d) All of the following prohibitions apply to any unit subject to the provisions of Title IV of the CAA and incorporated into this Permit under County Rule 371:

(1) Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners or operators of the unit or the designated representative of the owners or operators.

(2) Exceedances of applicable emission rates.

(3) The use of any allowance prior to the year for which it was allocated.

(4) Violation of any other provision of the permit.

B. ASBESTOS: [40 CFR 61, Subpart M] [County Rule 370 §301.8][locally enforceable only]
The Permittee shall comply with the applicable requirements of Sections 61.145 through 61.147 and 61.150 of the National Emission Standard for Asbestos and County Rule 370 for all demolition and renovation projects.

C. RISK MANAGEMENT PLAN (RMP): [40 CFR 68]
Should this stationary source, as defined in 40 CFR 68.3, be subject to the accidental release prevention regulations in 40 CFR Part 68, then the Permittee shall submit an RMP by the date specified in 40 CFR Section 68.10 and shall certify compliance with the requirements of 40 CFR Part 68 as part of the annual compliance certification as required by 40 CFR Part 70. However, neither the RMP nor modifications to the RMP shall be considered to be a part of this Permit.

D. STRATOSPHERIC OZONE PROTECTION: [40 CFR 82 Subparts E, F, and G]
If applicable, the Permittee shall follow the requirements of 40 CFR 82.106 through 82.124 with respect to the labeling of products using ozone depleting substances.

If applicable, the Permittee shall comply with all of the following requirements with respect to recycling and emissions reductions:

1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices under 40 CFR 82.156.

2) Equipment used during maintenance, service, repair, or disposal of appliances must meet the standards for recycling and recovery equipment in accordance with 40 CFR 82.158.

3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by a certified technician under 40 CFR 82.161.

If applicable, the Permittee shall follow the requirements of 40CFR 82 Subpart G, including all Appendices, with respect to the safe alternatives policy on the acceptability of substitutes for ozone-depleting compounds.

7. DUTY TO SUPPLEMENT OR CORRECT APPLICATION: [County Rule 210 §301.6]
If the Permittee fails to submit any relevant facts or has submitted incorrect information in a permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, the Permittee shall provide

additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit.

8. EMERGENCY EPISODES: [County Rule 600 §302] [SIP Rule 600 §302]

If an air pollution alert, warning, or emergency has been declared, the Permittee shall comply with any applicable requirements of County Rule 600 §302.

9. EMERGENCY PROVISIONS: [County Rule 130 §§201 & 402]

An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that cause the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

An emergency constitutes an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the requirements of this Permit Condition are met.

The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

A. An emergency occurred and that the Permittee can identify the cause or causes of the emergency;
B. At the time of the emergency, the permitted source was being properly operated;
C. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in this permit; and
D. The Permittee as soon as possible telephoned the Control Officer, giving notice of the emergency, and submitted notice of the emergency to the Control Officer by certified mail, facsimile, or hand delivery within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirement of County Rule 210 §302.1.e(2) with respect to deviation reporting. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

This provision is in addition to any emergency or upset provision contained in any applicable requirement.

10. EXCESS EMISSIONS: [County Rule 140 §§103, 401 & 402]

NOTE: There are reporting requirements associated with excess emissions. These requirements are contained in the Reporting section of the General Permit Conditions in a subparagraph called Excess Emissions. The definition of excess emissions can be found in County Rule 100 §200.

A. Exemptions: The excess emissions provisions of this Permit Condition do not apply to the following standards and limitations:

1) Promulgated pursuant to Section 111 (Standards Of Performance for New Stationary Sources) of the Clean Air Act (Act) or Section 112 (National Emission Standards For Hazardous Air Pollutants) of the Act;

2) Promulgated pursuant to Title IV (Acid Deposition Control) of the Act or the regulations promulgated thereunder and incorporated under Rule 371 (Acid Rain) of these rules or Title VI (Stratospheric Ozone Protection) of the Act;
3) Contained in any Prevention Of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the Environmental Protection Agency (EPA);
4) Included in a permit to meet the requirements of Rule 240 (Permit Requirements For New Major Sources And Major Modifications To Existing Major Sources), Subsection 308.1(e) (Permit Requirements For Sources Located In Attainment And Unclassified Areas) of these rules.

B. Affirmative Defense For Malfunctions: Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. The owner and/or operator of a source with emissions in excess of an applicable emission limitation due to malfunction has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner and/or operator of the source has complied with the excess emissions reporting requirements of these Permit Conditions and has demonstrated all of the following:
1) The excess emissions resulted from a sudden and unavoidable breakdown of the process equipment or the air pollution control equipment beyond the reasonable control of the operator;
2) The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
3) If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, then the owner and/or operator satisfactorily demonstrated that such measures were impractical;
4) The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
5) All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
6) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
7) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in County Rule 510 that could be attributed to the emitting source;
8) The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
9) All emissions monitoring systems were kept in operation, if at all practicable; and
10) The owner's and/or operator's actions in response to the excess emissions were documented by contemporaneous records.

C. Affirmative Defense for Startup and Shutdown:
1) Except as provided in paragraph 2) below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. The owner and/or operator of a source

with emissions in excess of an applicable emission limitation due to startup and shutdown has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner and/or operator of the source has complied with the excess emissions reporting requirements of these Permit Conditions and has demonstrated all of the following:

a. The excess emissions could not have been prevented through careful and prudent planning and design;
b. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
c. The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable, during periods of such emissions;
e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
f. During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in County Rule 510 (Air Quality Standards) that could be attributed to the emitting source;
g. All emissions monitoring systems were kept in operation, if at all practicable; and
h. The owner's and/or operator's actions in response to the excess emissions were documented by contemporaneous records.

2) If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to paragraph A. of this Permit Condition.

D. Affirmative Defense for Malfunctions during Scheduled Maintenance: If excess emissions occur due to malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to paragraph B. of this Permit Condition.

E. Demonstration Of Reasonable And Practicable Measures: For an affirmative defense under paragraphs A and B of this Permit Condition, the owner and/or operator of the source shall demonstrate, through submission of the data and information required by this Permit Condition and the excess emissions reporting requirements of these Permit Conditions, that all reasonable and practicable measures within the owner's and/or operator's control were implemented to prevent the occurrence of the excess emissions.

11. FEES: [County Rule 200 §409] [County Rule 210 §§302.1i & 401]
The Permittee shall pay fees to the Control Officer under ARS 49-480(D) and County Rule 280.

12. MODELING: [County Rule 200 §407] [locally enforceable only]
Where the Control Officer requires the Permittee to perform air quality impact modeling, the Permittee shall perform the modeling in a manner consistent with the "Guideline on Air Quality

Models (Revised)" (EPA-450/2-78-027R, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, July 1986) and "Supplement B to the Guideline on Air Quality Models" (U.S. Environmental Protection Agency, September 1990). Both documents shall be referred to hereinafter as "Guideline", and are adopted by reference. Where the person can demonstrate that an air quality impact model specified in the guideline is inappropriate, the model may be modified or another model substituted if found to be acceptable to the Control Officer.

13. MONITORING / TESTING:

A. The Permittee shall monitor, sample, or perform other studies to quantify emissions of regulated air pollutants or levels of air pollution that may reasonably be attributable to the facility if required to do so by the Control Officer, either by Permit or by order in accordance with County Rule 200 §309.

[County Rule 200 §309] [SIP Rule 41]

B. Except as otherwise specified in these Permit Conditions or by the Control Officer, the Permittee shall conduct required testing used to determine compliance with standards or permit conditions established under the County or SIP Rules or these Permit Conditions in accordance with County Rule 270 and the applicable testing procedures contained in the applicable Rule, the Arizona Testing Manual for Air Pollutant Emissions or other approved USEPA test methods.

[County Rule 200 §408] [County Rule 210 §302.1.c] [County Rule 270 §§300 & 400] [SIP Rule 27]

C. The owner or operator of a permitted source shall provide, or cause to be provided, performance testing facilities as follows:

1) Sampling ports adequate for test methods applicable to such source.
2) Safe sampling platform(s).
3) Safe access to sampling platforms(s).
4) Utilities for sampling and testing equipment.

[County Rule 270 §405] [SIP Rule 42]

14. PERMITS:

A. BASIC: [County Rule 210 §302.1h(3)]

This Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any Permit Condition.

B. DUST CONTROL PLAN REQUIREMENTS:

(NOTE: If the Permittee engages in or allows any routine dust generating activities at the facility, the Permittee needs to have the routine dust generating activity covered as part of this Permit. Nonroutine activities, such as construction, require a separate Earthmoving Permit that must be obtained from the Control Officer before the activity may begin.)

1) The Permittee must first submit a Dust Control Plan and obtain the Control Officer's approval of the Dust Control Plan before commencing any routine dust generating operation.

[County Rule 310 §303.3] [SIP Rule 310 §303.3]

2) A Dust Control Plan shall not be required to play on a ball field and/or for landscape maintenance. For the purpose of this Permit Condition, landscape maintenance does not include grading, trenching, nor any other mechanized surface disturbing activities.

[County Rule 310 §303.4] [SIP Rule 310 §303.4]

3) Any Dust Control Plan shall, at a minimum, contain all the information described in Section 304 of Rule 310.

[County Rule 310 §§303.1 & 304] [SIP Rule 310 §§303.1 & 304]

4) Regardless of whether an approved Dust Control Plan is in place or not, the Permittee is still subject to all requirements of Rule 310 at all times.

[County Rule 310 §303] [SIP Rule 310 §303]

C. PERMITS AND PERMIT CHANGES, AMENDMENTS AND REVISIONS:

1) The Permittee shall comply with the Administrative Requirements of Section 400 of County Rule 210 for all changes, amendments and revisions at the facility for any source subject to regulation under County Rule 200, shall comply with all required time frames, and shall obtain any required preapproval from the Control Officer before making changes. All applications shall be filed in the manner and form prescribed by the Control Officer. The application shall contain all the information necessary to enable the Control Officer to make the determination to grant or to deny a permit or permit revision including information listed in County Rule 200 §308 and County Rule 210 §§301 & 302.3.

[County Rule 200 §§301 & 308] [County Rule 210 §§301.4a, b, c, & 400]

2) The Permittee shall supply a complete copy of each application for a permit, a minor permit revision, or a significant permit revision directly to the Administrator of the USEPA. The Control Officer may require the application information to be submitted in a computer-readable format compatible with the Administrator's national database management system.

[County Rule 210 §§303.1a, 303.2, 405.4, & 406.4]

3) While processing an application, the Control Officer may require the applicant to provide additional information and may set a reasonable deadline for a response.

[County Rule 210 §301.4f]

4) No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

[County Rule 210 §302.1j]

D. POSTING:

1) The Permittee shall keep a complete permit clearly visible and accessible on the site where the equipment is installed.

[County Rule 200 §311]

2) If a Dust Control Plan, as required by Rule 310, has been approved by the Control Officer, the Permittee shall post a copy of the approved Dust Control Plan in a conspicuous location at the work site, within on-site equipment, or in an on-site vehicle, or shall otherwise keep a copy of the Dust Control Plan available on site at all times.

[County Rule 310 §401] [SIP Rule 310 §401]

E. PROHIBITION ON PERMIT MODIFICATION: [County Rule 200 §310]

The Permittee shall not willfully deface, alter, forge, counterfeit, or falsify this permit.

F. RENEWAL:

1) The Permittee shall submit an application for the renewal of this Permit in a timely and complete manner. For purposes of permit renewal, a timely application is one that is submitted at least six months, but not more than 18 months, prior to the date of permit expiration. A complete application shall contain all of the information required by the County Rules including Rule 200 §308 and Rule 210 §§301 & 302.3.

[County Rule 210 §§301.2a, 301.4a, b, c, d, h & 302.3]

2) The Permittee shall file all permit applications in the manner and form prescribed by the Control Officer. To apply for a permit renewal, the Permittee shall complete the "Standard Permit Application Form" and shall supply all information, including the information required by the "Filing Instructions" as shown in Appendix B of the County Rules, which is necessary to enable the Control Officer to make the determination to grant or to deny a permit which shall contain such terms and conditions as the Control Officer deems necessary to assure a source's compliance with the requirements of the CAA, ARS and County Rules.

[County Rule 200 §§308 & 309] [County Rule 210 §301.1]

3) The Control Officer may require the Permittee to provide additional information and may set a reasonable deadline for a response.

[County Rule 210 §301.4f]

4) If the Permittee submits a timely and complete application for a permit renewal, but the Control Officer has failed to issue or deny the renewal permit before the end of the term of the previous permit, then the permit shall not expire until the renewal permit has been issued or denied. This protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit, by the deadline specified by the Control Officer, any additional information identified as being needed to process the application.

[County Rule 200 §403.2] [County Rule 210 §§301.4f & 301.9]

G. REVISION / REOPENING / REVOCATION:

1) This permit shall be reopened and revised to incorporate additional applicable requirements adopted by the Administrator pursuant to the CAA that become applicable to the facility if this permit has a remaining permit term of three or more years. No such reopening is required if the effective date of the requirement is later than the date on which this Permit is due to expire unless the original permit or any of its terms have been extended pursuant to Rule 200 §403.2.

[County Rules 200 §402.1]

Any permit revision required under this Permit Condition, 14.G.1, shall reopen the entire permit and shall comply with provisions in County Rule 200 for permit renewal *(Note:*

this includes a facility wide application and public comment on the entire permit) and shall reset the five year permit term.

[County Rules 200 §402.1a(1) & 210 §302.5]

2) This permit shall be reopened and revised under any of the following circumstances:
   a) Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Title V permit.
   b) The Control Officer or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
   c) The Control Officer or the Administrator determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

   Proceedings to reopen and issue a permit under this Permit Condition, 14.G.2, shall follow the same procedures as apply to initial permit issuance and shall effect only those parts of the Permit for which cause to reopen exists.

   [County Rule 200 §402.1]

3) This permit shall be reopened by the Control Officer and any permit shield revised, when it is determined that standards or conditions in the permit are based on incorrect information provided by the applicant.

   [County Rule 210 §407.3]

4) This Permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Permit revision, revocation and reissuance, or termination or of a notification of planned changes or anticipated noncompliance does not stay any Permit Condition.

   [County Rule 210 §302.1h(3)]

H. REVISION UNDER A FEDERAL HAZARDOUS AIR POLLUTANT STANDARD:

[County Rule 210 §301.2c] [locally enforceable only]

If the Permittee becomes subject to a standard promulgated by the Administrator under Section 112(d) of the CAA, the Permittee shall, within 12 months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

I. REQUIREMENTS FOR A PERMIT:

1) Air Quality Permit: Except as noted under the provisions in Sections 403 and 405 of County Rule 210, no source may operate after the time that it is required to submit a timely and complete application, except in compliance with a permit issued under County Rule 210. Permit expiration terminates the Permittee's right to operate. However, if a source submits a timely and complete application, as defined in County Rule 210 §301, for permit issuance, revision, or renewal, the source's failure to have a permit is not a violation of the County Rules until the Control Officer takes final action on the application. The Source's ability to operate without a permit as set forth in this paragraph shall be in effect from the date the application is determined to be complete until the final

permit is issued. This protection shall cease to apply if, subsequent to the completeness determination, the applicant fails to submit, by the deadline specified in writing by the Control Officer, any additional information identified as being needed to process the application. If a source submits a timely and complete application for a permit renewal, but the Control Officer has failed to issue or deny the renewal permit before the end of the term of the previous permit, then the permit shall not expire until the permit renewal has been issued or denied.

[County Rule 210 §301.9]

Earthmoving Permit:

(NOTE: If the Permittee engages in or allows any routine dust generating activities at the facility, the Permittee needs to have the routine dust generating activity covered as part of this Permit. Non-routine activities, such as construction, require a separate Earthmoving Permit that must be obtained from the Control Officer before the activity may begin.)

The Permittee shall not cause, commence, suffer, allow, or engage in any earthmoving operation that disturbs a total surface area of 0.10 acre or more without first obtaining a permit from the Control Officer. Permits shall not be required for earthmoving operations for emergency repair of utilities, paved roads, unpaved roads, shoulders, and/or alleys.

[County Rule 200 §305]

3) Burn Permit: The Permittee shall obtain a Permit To Burn from the Control Officer before conducting any open outdoor fire except for the activities listed in County Rule 314 §§302.1 and 302.2.

[County Rule 314] [County Rule 200 §306] [SIP Rule 314]

J. RIGHTS AND PRIVILEGES: [County Rule 210 §302.1h (4)]

This Permit does not convey any property rights nor exclusive privilege of any sort.

K. SEVERABILITY: [County Rule 210 §302.1g]

The provisions of this Permit are severable, and, if any provision of this Permit is held invalid, the remainder of this Permit shall not be affected thereby.

L. SCOPE:

The issuance of any permit or permit revision shall not relieve the Permittee from compliance with any Federal laws, Arizona laws, or the County or SIP Rules, nor does any other law, regulation or permit relieve the Permittee from obtaining a permit or permit revision required under the County Rules.

[County Rule 200 §308]

Nothing in this permit shall alter or affect the following:

1) The provisions of Section 303 of the Act (Emergency Orders), including the authority of the Administrator of the USEPA under that section.
2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance.
3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act.

4) The ability of the Administrator of the USEPA or of the Control Officer to obtain information from the Permittee under Section 114 of the Act, or any provision of State law.
5) The authority of the Control Officer to require compliance with new applicable requirements adopted after the permit is issued. [locally enforceable only]

[County Rule 210 §407.2]

M. TERM OF PERMIT: [County Rule 210 §§302.1a & 402]
This Permit shall remain in effect for no more than 5 years from the date of issuance.

N. TRANSFER: [County Rule 200 §404]
Except as provided in ARS §49-429 and County Rule 200, this permit may be transferred to another person if the Permittee gives notice to the Control Officer in writing at least 30 days before the proposed transfer and complies with the permit transfer requirements of County Rule 200 and the administrative permit amendment procedures under County Rule 210.

15. RECORDKEEPING:

A. RECORDS REQUIRED: [County Rule 100 §501] [County Rule 310 §502] [SIP Rule 40 A]
The Permittee shall maintain records of all emissions testing and monitoring, records detailing all malfunctions which may cause any applicable emission limitation to be exceeded, records detailing the implementation of approved control plans and compliance schedules, records required as a condition of any permit, records of materials used or produced, and any other records relating to the emission of air contaminants which may be requested by the Control Officer.

B. RETENTION OF RECORDS:
Unless a longer time frame is specified by these Permit Conditions, information and records required by applicable requirements and copies of summarizing reports recorded by the Permittee and submitted to the Control Officer shall be retained by the Permittee for 5 years after the date on which the information is recorded or the report is submitted

[County Rule 100 §504] [SIP Rule 40 C]

The Permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

[County Rule 210 §§302.1d(2)]

C. MONITORING RECORDS: [County Rule 210 §§302.1d(1) & 305.1b]
Records of any monitoring required by this Permit shall include the following:
1) The date, place as defined in the permit, and time of sampling or measurements;
2) The date(s) analyses were performed;
3) The name of the company or entity that performed the analysis;
4) The analytical techniques or methods used;
5) The results of such analysis; and
6) The operating conditions as existing at the time of sampling or measurement.

D. RIGHT OF INSPECTION OF RECORDS: [County Rule 100 §106] [SIP Rule 40 D]
When the Control Officer has reasonable cause to believe that the Permittee has violated or is in violation of any provision of County Rule 100 or any County Rule adopted under County Rule 100, or any requirement of this permit, the Control Officer may request, in writing, that the Permittee produce all existing books, records, and other documents evidencing tests, inspections, or studies which may reasonably relate to compliance or noncompliance with County Rules adopted under County Rule 100. No person shall fail nor refuse to produce all existing documents required in such written request by the Control Officer.

16. REPORTING:
NOTE: See the Permit Condition titled Certification Of Truth, Accuracy and Completeness in conjunction with reporting requirements.

A. ANNUAL EMISSION INVENTORY REPORT: [County Rule 100 §505] [SIP Rule 40 B]
Upon request of the Control Officer and as directed by the Control Officer, the Permittee shall complete and shall submit to the Control Officer an annual emissions inventory report. The report is due by April 30, or 90 days after the Control Officer makes the inventory form(s) available, whichever occurs later.

The annual emissions inventory report shall be in the format provided by the Control Officer.

The Control Officer may require submittal of supplemental emissions inventory information forms for air contaminants under ARS §49-476.01, ARS §49-480.03 and ARS §49-480.04.

B. DATA REPORTING: [County Rule 100 §502]
When requested by the Control Officer, the Permittee shall furnish to the Maricopa County Air Quality Division (Division hereafter) information to locate and classify air contaminant sources according to type, level, duration, frequency, and other characteristics of emissions and such other information as may be necessary. This information shall be sufficient to evaluate the effect on air quality and compliance with the County or SIP Rules. The Permittee may subsequently be required to submit annually, or at such intervals specified by the Control Officer, reports detailing any changes in the nature of the source since the previous report and the total annual quantities of materials used or air contaminants emitted.

C. DEVIATION REPORTING: [County Rule 210 §§302.1e & 305.1c]
The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions. Unless specified otherwise elsewhere in these Permit Conditions, an upset for the purposes of this Permit Condition shall be defined as the operation of any process, equipment or air pollution control device outside of either its normal design criteria or operating conditions specified in this Permit and which results in an exceedance of any applicable emission limitation or standard. The Permittee shall submit the report to the Control Officer within 2 working days from knowledge of the deviation. The report shall contain a description of the probable cause of such deviations and any corrective actions or preventive measures taken. In addition, the Permittee shall report within a reasonable time of any long-term corrective actions or preventative actions taken as the result of any deviations from permit requirements.

All instances of deviations from the requirements of this Permit shall also be clearly identified in the semiannual monitoring reports required in the Specific Condition section of these Permit Conditions.

D. EMERGENCY REPORTING: [County Rule 130 §402.4]

(NOTE: Emergency Reporting is one of the special requirements which must be met by a Permittee wishing to claim an affirmative defense under the emergency provisions of County Rule 130. These provisions are listed earlier in these General Conditions in the section titled "Emergency Provisions". Since it is a form of deviation reporting, the filing of an emergency report also satisfies the requirement of County Rule 210 to file a deviation report.)

The Permittee shall, as soon as possible, telephone the Control Officer giving notice of the emergency, and submitted notice of the emergency to the Control Officer by certified mail, facsimile, or hand delivery within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.

E. EMISSION STATEMENTS REQUIRED AS STATED IN THE ACT:

[County Rule 100 §503]

Upon request of the Control Officer and as directed by the Control Officer, the Permittee shall provide the Control Officer with an emission statement, in such form as the Control Officer prescribes, showing measured actual emissions or estimated actual emissions of NO_x and volatile organic compounds (VOC) from that source. At a minimum, the emission statement shall contain all information contained in the "Guidance on Emission Statements" document as described in the USEPA's Aerometric Information Retrieval System (AIRS) Fixed Format Report (AFP 644). The statement shall contain emissions for the time period specified by the Control Officer. Statements shall be submitted annually.

F. EXCESS EMISSIONS REPORTING: [County Rule 140 §500] [locally enforceable only]

(NOTE: This reporting subsection is associated with the requirements listed earlier in these General Conditions in the section titled "Excess Emissions".)

1) The owner and/or operator of any source shall report to the Control Officer any emissions in excess of the limits established by the County or SIP Rules or by these Permit Conditions. The report shall be in two parts as specified below:
   a) Notification by telephone or facsimile within 24 hours of the time when the owner and/or operator first learned of the occurrence of excess emissions that includes all available information from paragraph 2) of this Permit Condition.
   b) Detailed written notification by submission of an excess emissions report within 72 hours of the notification required by paragraph 1) a) of this Permit Condition.

2) The excess emissions report shall contain the following information:
   a) The identity of each stack or other emission point where the excess emissions occurred;
   b) The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
   c) The time and duration or expected duration of the excess emissions;
   d) The identity of the equipment from which the excess emissions emanated;

e) The nature and cause of such emissions;
f) The steps taken, if the excess emissions were the result of a malfunction, to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions;
g) The steps that were or are being taken to limit the excess emissions; and
h) If this Permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the Permit procedures.

3) In the case of continuous or recurring excess emissions, the notification requirements of this Permit Condition shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in the notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to paragraphs 1) and 2) of this Permit Condition.

G. OTHER REPORTING: [County Rule 210 §302.1h(5)]
The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing this permit, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by this Permit. For information claimed to be confidential, the Permittee shall furnish a copy of such records directly to the Administrator of the USEPA along with a claim of confidentiality as covered elsewhere in these Permit Conditions.

17. RIGHT TO ENTRY AND INSPECTION OF PREMISES:

The Control Officer, during reasonable hours, for the purpose of enforcing and administering County Rules or any provision of ARS relating to the emission or control prescribed pursuant thereto, may enter every building, premises, or other place, except the interior of structures used as private residences. Every person is guilty of a petty offense under ARS §49-488 who in any way denies, obstructs or hampers such entrance or inspection that is lawfully authorized by warrant.
[County Rule 100 §105]

The Permittee shall allow the Control Officer or his authorized representative, upon presentation of proper credentials and other documents as may be required by law, to:

A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
[County Rule 210 §305.1f] [SIP Rule 43]

B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
[County Rule 210 §305.1f] [SIP Rule 43]

C. Inspect, at reasonable times, any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
[County Rule 210 §305.1f] [SIP Rule 43]

D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
[County Rule 210 §305.1f] [SIP Rule 43]

E. To record any inspection by use of written, electronic, magnetic, and photographic media.
[County Rule 210 §305.1f] [Locally enforceable only]

SPECIFIC CONDITIONS:

18. FACILITY WIDE ALLOWABLE EMISSION LIMITS:

A. Opacity Requirements

1) The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20 percent opacity, except as provided in County Rule 300 §302.
[County Rule 300 §301] [Locally enforceable only]

2) Except as otherwise provided in Regulation I, Rule 4, Exceptions, the opacity of any plume or effluent from any source of emissions, other than uncombined water, shall not be greater than 40 percent opacity as determined by Reference Method 9 in the Arizona Testing Manual.
[SIP Rule 30 A]

B. Particulate Matter Limits for Process Applications
The Permittee shall not discharge or cause or allow the discharge of particulate matter into the ambient air from any affected operation in excess of the allowable hourly emission rate determined by the following equation:

$E = 3.59\ P^{0.62}$

Where:
E = Emissions in pounds per hour
P = Process weight in tons per hour
[County Rule 311 §301.1] [SIP Rule 311 §301.1]

C. Particulate Matter Limits for Fuel Burning Equipment
The Permittee shall not discharge or cause or allow the discharge of particulate matter emissions, caused by combustion of fuel, from any fuel burning operation in excess of amounts determined by the following equation:

$E = 1.02\ Q^{0.769}$

Where:
E = The maximum allowable emission rate in pounds-mass per hour, and
Q = The heat output in million BTU per hour.
[SIP Rule 311 §304.1]

D. Gaseous and Odorous Contaminants
The Permittee shall not emit gaseous or odorous air contaminants from equipment, operations or premises under its control in such quantities or concentrations as to cause air pollution.
[County Rule 320 §300] [SIP Rule 32.A]

E. Protection of Stratospheric Ozone

The Permittee shall follow all the requirements of 40 CFR 82.30 to 82.40 and 40 CFR 82.80 to 82.86 concerning the Protection of Stratospheric Ozone.

[40 CFR 82 Subparts B, and D]

19. FACILITY WIDE OPERATIONAL LIMITATIONS AND REQUIREMENTS:

A. Facility-Wide Operational Requirements

1) Materials including, but not limited to, solvents or other volatile compounds, paints, acids, alkali's, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices or equipment shall be mandatory.

[County Rule 320 §302] [SIP 32C]

2) Where a stack, vent or other outlet is at such a level that air contaminants are discharged to adjoining property, the County may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet to a degree that will adequately dilute, reduce or eliminate the discharge of air contaminants to adjoining property.

[County Rule 320 §303] [SIP 32D]

3) VOC Containment and Disposal

The Permittee shall not store, discard, or dispose of VOC or VOC-containing material in a way intended to cause or to allow the evaporation of VOC to the atmosphere. Reasonable measures shall be taken to prevent such evaporation, which include but are not limited to the following:

a. All materials from which VOC can evaporate, including fresh solvent, waste solvent and solvent soaked rags and residues, shall be stored in closed containers;
b. Such containers one gallon and larger shall be legibly labeled with their contents; and
c. Records of the disposal/recovery of such materials shall be kept. Records of hazardous waste disposal shall be kept in accordance with hazardous waste disposal statutes.

[County Rule 330§306] [Locally enforceable only]

4) The Permittee shall not use any fuel that contains greater than 0.05% sulfur by weight in any permitted equipment at the facility.

[County Rule 320 §305]

5) Protection of Stratospheric Ozone

The Permittee shall follow all the requirements of 40 CFR 82.30 to 82.40 and 40 CFR 82.80 to 82.86 concerning the Protection of Stratospheric Ozone.

[40 CFR 82 Subparts B, and D]

20. FACILITY WIDE MONITORING AND RECORD KEEPING REQUIREMENTS:

A. The Permittee shall maintain a log of complaints of odors detected off-site. The log shall contain a description of the complaint, date and time that the complaint was received, and if given, name and/or phone number of the complainant. The logbook shall describe what actions were performed to investigate the complaint, the results of the investigation, and any corrective actions that were taken.

[County Rule 210 §302.1c(2)] [Locally enforceable only]

B. The Permittee shall conduct a weekly facility walk-through and observe visible emissions from any source capable of emitting any air contaminant, other than uncombined water, to the ambient air. This includes but not limited to test cells, boilers, abrasive blasting units, air heaters and furnaces.

[County Rule 300] [County Rule 210 §302.1c(1)] [SIP Rule 30]

C. The Permittee shall log the following information for all visible emissions observations and Method 9 opacity readings required by this permit:

1) The date and time the visible emissions observation or Method 9 opacity reading was taken;
2) The name of the observer;
3) Whether or not visible emissions were present;
4) If visible emissions are present and the controls and facility processes are operating in a mode other than their normal operating conditions, such as startup or shutdown, a description of the operating conditions at the time that the opacity is observed;
5) The opacity determined by a Method 9 opacity reading, if a Method 9 reading is required by these permit conditions;
6) If applicable, a description of any corrective action(s) taken, including the date of such action(s); and
7) Any other related information.

[County Rule 300] [County Rule 210 §302.1]

D. If visible emissions, other than uncombined water, are observed being discharged into the ambient air, the Permittee shall monitor for compliance with the opacity standards specified in this permit by having a certified visible emissions evaluator determine the opacity of the visible emissions being discharged into the ambient air using the techniques specified in EPA Reference Method 9.

If the Permittee has not received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of visible emissions, the initial Method 9 opacity reading shall be taken within three days of observing visible emissions. If the Permittee has received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of emissions, the initial Method 9 opacity reading shall be taken within one day of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next day that the emitting equipment is in operation. If the problem causing the visible emissions is corrected before the initial Method 9 opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity readings.

Follow-up Method 9 opacity readings shall be performed by a certified visible emissions evaluator while the emitting equipment in its standard mode of operation in accordance with the following schedule:

1) Daily:
   a) Except as provided in paragraph 3 of this Permit Condition, a Method 9 opacity reading shall be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 readings have occurred.
   b) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly, in accordance with paragraph 2 of this Permit Condition.
2) Weekly:
   a) If the Permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the equipment is operated.
   b) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with paragraph 1 of this Permit Condition.
   c) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of paragraph 3 of this Permit Condition are met.
3) Cease Follow-up Method 9 Opacity Monitoring:
   Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure.

[County Rule 210 §302.1c]

E. Opacity Readings

1) Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.

[40 CFR 60.11.b] [County Rule 300 §501]

2) Opacity of visible emissions from intermittent sources as defined by County Rule 300 §201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 25 consecutive readings shall be required at 15-second intervals for the averaging time.

[County Rule 300 §502][Locally enforceable only]

F. The Permittee shall maintain all of the specified records for a total of five years and shall make them available to the County upon request.

[County Rule 200 §309] [County Rule 210 §300]

G. Determination of Compliance of Organic Solvents

Determination of the organic solvent content and composition of a solvent or material shall be made as of the time that the solvent or material is in its final form for application or employment, notwithstanding any prior blending, reducing, thinning or other preparation for application or employment. Emission resulting from air or heat drying of products for the

first 12 hours after the removal from any machine, equipment, device or other article shall be included in determining compliance with this rule.

[County Rule 330 §502] [SIP Rule 34]

H. VOC Containing Materials

1) Current List

Maintain a current list of coatings, adhesives, makeup solvents, and any other VOC containing materials; state the VOC content of each in pounds per gallon or grams per liter. VOC content shall be expressed less water and non-precursor compounds for materials, which are not used for cleanup.

[County Rule 330 §503] [Locally enforceable only]

2) Monthly Usage Records

Maintain monthly records of the amount of each coating; adhesive; makeup solvent; solvent used for surface preparation, for cleanup, and for the removal of materials; and any other VOC-containing material used. Identify any materials subject to the emission limits in County Rule 330 §§301&302 and keep separate totals for these materials.

[County Rule 330 §503] [Locally enforceable only]

3) Discarded VOC Materials

Maintain records of the type, amount, and method of VOC-containing materials on each day of disposal.

[County Rule 330 §503] [Locally enforceable only]

I. Diesel Fuel and other Fuel Oils

The Permittee shall maintain records of fuel receipts, contract specifications, pipeline meter tickets or Material Safety Data Sheets (MSDS) from the fuel supplier indicating the sulfur content of the fuel oil. If proof of the sulfur content is requested by the Control Officer for any fuel combusted at the facility, the Permittee shall submit these records indicating the sulfur content of the fuel oil. In lieu of these, testing of the fuel oil for sulfur content to meet the 0.05% limit shall be permitted if so desired by the Permittee for evidence of compliance. If testing of the fuel oil is chosen as a method of compliance, all records of testing shall be kept for a period no less than five years.

[County Rule 210 §302.1c(2)]

J. Protection of Stratospheric Ozone

The Permittee shall follow all the requirements of 40 CFR 82.30 to 82.40 and 40 CFR 82.80 to 82.86 concerning the Protection of Stratospheric Ozone.

[40 CFR 82 Subparts B, and D]

21. FACILITY WIDE REPORTING REQUIREMENTS:

The Permittee shall file semiannual monitoring reports with the Control Officer, Attn: Large Source Compliance Supervisor. The initial reporting period shall begin on the permit issuance date and shall cover a period of 6 months or less. The second and subsequent reporting periods shall be in 6-month intervals after the end of the initial reporting period. The semiannual monitoring reports shall be filed by the end of the month following the reporting period. Each report shall cover all instances of deviations from these permit conditions during the reporting period, the cause of the deviations if

any were present, and any applicable corrective actions taken. The monitoring report shall also contain the following information at a minimum:

A. Emissions Calculations

The Permittee shall include the results of any required monthly and the rolling 12-month emission for each month in the six-month reporting period.

[County Rule 210 §302.1e]

B. Deviation Reporting

The Permittee shall identify all instances of deviations from the permit requirements in the semi-annual monitoring report. The Permittee shall include the probable cause of such deviations, and any corrective actions or preventive measures taken.

[County Rule 210 §302.1e(1)]

C. Odor Log

The Permittee shall provide a copy of the portion of the portion of the odor log that covers the applicable 6-month reporting period. If no complaints were received during the reporting period, a statement to that effect may be substituted for a copy of the odor log.

[County Rule 210 §302.1e(1)] [County Rule 320]

D. Reporting:

The Permittee shall include the following in each semi-annual Compliance Report:

1) The dates of any week that the required visible emissions observations were not taken, an explanation for the deviation from the monitoring requirement, and a description of any action taken to ensure that future observations are performed, if applicable;
2) The source and location from which visible emissions were observed;
3) Any date which visible emissions were observed;
4) The approximate time of the observation;
5) The name of the observer;
6) A description of any corrective actions taken, if any, to reduce the visible emissions; and
7) If a follow-up Method 9 reading was required, the opacity of the emissions determined by Method 9, a copy of the visual determination of opacity record showing all information required by the Method and any other related information.

[County Rule 210 §302.1e]

E. Protection of Stratospheric Ozone

The Permittee shall follow all the requirements of 40 CFR 82.30 to 82.40 and 40 CFR 82.80 to 82.86 concerning the Protection of Stratospheric Ozone.

[40 CFR 82 Subparts B, and D]

22. INTERNAL COMBUSTION SOURCES: EMERGENCY GENERATORS

A. Affected Sources

Diesel, natural gas, and gasoline powered engine-driven emergency electric generators.

B. Operational Limits and Standards

1) Emergency Generators Only: Except for routine testing, emergency generators shall be used only when normal power service fails from the serving utility or if onsite electrical

transmission or onsite power generation equipment fails. Emergency generators shall not be used for peak shaving or if the power interruption is due to a voluntary reduction by the power company. The Permittee shall limit the operation of each diesel generator to no more than 500 hours per year.

[County Rule 200, §303.3(5)(b)]

2) The Permittee shall not use any fuel that contains greater than 0.05% sulfur by weight.

[County Rule 320 §306.4]

C. Monitoring and Recordkeeping Requirements

1) The Permittee shall conduct a weekly facility walk-through and observe visible emissions from any source capable of emitting any air contaminant, other than uncombined water, to the ambient air. This includes but not limited to test cells, boilers, abrasive blasting units, thermal sprays, air heaters and furnaces. The Permittee shall log the visual observations, including the date and approximate time when that reading, location of visible emissions or a statement that no visible emissions were observed, name of the person who took the observation and any other related information.

[County Rule 300] [County Rule 210 §302.1c(1)] [SIP Rule 30]

2) The Permittee shall log the following information for all visible emissions observations and Method 9 opacity readings required by this permit:
   a) The date and time the visible emissions observation or Method 9 opacity reading was taken;
   b) The name of the observer;
   c) Whether or not visible emissions were present;
   d) If visible emissions are present and the controls and facility processes are operating in a mode other than their normal operating conditions, such as startup or shutdown, a description of the operating conditions at the time that the opacity is observed;
   e) The opacity determined by a Method 9 opacity reading, if a Method 9 reading is required by these permit conditions;
   f) If applicable, a description of any corrective action(s) taken, including the date of such action(s); and
   g) Any other related information.

[County Rule 300] [County Rule 210 §302.1]

3) If visible emissions, other than uncombined water, are observed being discharged into the ambient air, the Permittee shall monitor for compliance with the opacity standards specified in this permit by having a certified visible emissions evaluator determine the opacity of the visible emissions being discharged into the ambient air using the techniques specified in EPA Reference Method 9.

If the Permittee has not received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of visible emissions, the initial Method 9 opacity reading shall be taken within three days of observing visible emissions. If the Permittee has received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of emissions, the initial Method 9 opacity reading shall be

taken within one day of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next day that the emitting equipment is in operation. If the problem causing the visible emissions is corrected before the initial Method 9 opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity readings.

Follow-up Method 9 opacity readings shall be performed by a certified visible emissions evaluator while the emitting equipment in its standard mode of operation in accordance with the following schedule:

Daily:

a) Except as provided in paragraph 3 of this Permit Condition, a Method 9 opacity reading shall be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 readings have occurred.
b) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly, in accordance with paragraph 2 of this Permit Condition.

Weekly:

a) If the permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the equipment is operated.
b) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with paragraph 1 of this Permit Condition.
c) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of paragraph 3 of this Permit Condition are met.

4) Cease Follow-up Method 9 Opacity Monitoring:
Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure.

[County Rule 210 §302.1c]

5) Opacity Readings

a) Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.

[40 CFR 60.11.b] [County Rule 300 §501]

b) Opacity of visible emissions from intermittent sources as defined by County Rule 300 §201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 25 consecutive readings shall be required at 15-second intervals for the averaging time.

[County Rule 300 §502][Locally enforceable only]

6) Emergency Generators
   (a) The Permittee shall keep accurate daily run time usage records for each emergency generator showing the date the unit was operated, start up and shut down time and cumulative monthly run time.
   (b) The Permittee shall keep records of all fuel used for the operation of the emergency generators which documents the sulfur content of the fuel. These documents can be in the form of MSDS's, technical data sheets from the vendor, or sales records that include the sulfur content specifications of the fuel.

[County Rule 210 §302.1c]

D) Reporting

The Permittee shall include the following in each semi-annual Compliance Report:

1) The dates of any week that the required visible emissions observations were not taken, an explanation for the deviation from the monitoring requirement, and a description of any action taken to ensure that future observations are performed, if applicable;
2) The source and location from which visible emissions were observed;
3) Any date which visible emissions were observed;
4) The approximate time of the observation;
5) The name of the observer;
6) A description of any corrective actions taken, if any, to reduce the visible emissions; and
7) If a follow-up Method 9 reading was required, the opacity of the emissions determined by Method 9, a copy of the visual determination of opacity record showing all information required by the Method and any other related information.

[County Rule 210 §302.1e]

8) Emergency Generators:
   The Permittee shall include in each semiannual report the hours of operation for each of the emergency generators.

[County Rule 210 §302.1.e.(1)]]

23. INTERNAL COMBUSTION SOURCES: PEAK SHAVING GENERATOR

A. Affected Sources

One 1250 kW natural gas powered peak shaving generator at Building 1158.

B. Allowable Emissions Limitations

1) The Permittee shall not discharge into the atmosphere from the exhaust stack of the Peak Shaving Generator any air contaminant, other than uncombined water, in excess of 20% opacity.

[County Rule 300 §§301 & 502] [Locally Enforceable Only]

2) Except as otherwise provided in Regulation I, Rule 4, Exceptions, the Permittee shall not cause, allow or permit to be emitted into the atmosphere from any single source of emissions any air contaminant other than uncombined water, greater than or equal to 40% opacity.

[SIP Rule 30]

3) The Permittee shall not allow emissions from the Natural Gas Fired Peak Shaving Generator to be emitted into the atmosphere in excess of any of the following limits:

Pollutant	Daily Emission Limit (lbs/day)	Rolling Twelve Month Total Allowable Emissions (tons/year)
Carbon Monoxide	60	5
Oxides of Nitrogen (NO_x)	150	8
Total Volatile Organic Compounds (VOCs)	30	1.5
Particulate matter 10 microns and smaller (PM_{10})	7	0.6

[County Rule 210 §302.1(b)

4) The Permittee shall not emit gaseous or odorous air contaminants from the Peak Shaving Generator in such quantities or concentrations as to cause air pollution.

[County Rule 210 §302.1(b)]

C. Operational Limits and Standards

1) The Permittee shall use only commercial "pipeline quality" natural gas, excluding landfill gas or gaseous fuels obtained by other than mere extraction from the earth, as fuel for the Peak Shaving Generator. The Permittee shall not operate the Peak Shaving Generator unless the natural gas feed line has a dedicated, non-resettable flowmeter installed and in good operating order.

[County Rule 210 §302.1(b)]

2) The Permittee shall not operate the Peak Shaving Generator for more than 1362 hours per year.

[County Rule 210 §302.1(b)]

3) The Permittee shall not operate the Peak Shaving generator unless there is a meter installed on the generator measuring its electrical output.

[County Rule 210 §302.1(b)]

4) The Permittee shall operate the Peak Shaving Generator within 10% of 100% of full load as measured by an installed load meter that reads percent of full load operation. This requirement does not apply during startup. Startup shall last approximately 0.5 hour.

[County Rule 210 §302.1(b)]

5) The Permittee shall not operate the Peak Shaving Generator unless all of the monitoring/recordkeeping data required by these permit conditions is recorded.

[County Rule 210 §302.1(b)]

6) The Permittee shall insure that the Peak Shaving Generator is operated in its most optimum manner in accordance with manufacturer's operating specifications and/or rebuilder's operating guidelines.

[County Rule 210 §302.1(b)]

D. Monitoring and Recordkeeping Requirements

1) A permanent log shall be maintained on site in proximity of the Peak Shaving Generator, available for inspections and will contain the following:
   a) Every time the Peak Shaving Generator is run, the date, start time and initials of the operator starting the Peak-Shaver, contemporaneously with the Peak Shaving Generator start-up;
   b) Every time the Peak Shaving Generator is run, the date, the shut-off time, the number of hours of operation of the Peak Shaving Generator since the last start-up, and the initials of the operator stopping the Peak Shaving Generator, contemporaneously with the Peak Shaving Generator shut off;
   c) Every time the Peak Shaving Generator is run, a recording of the percent of full load reading as measured by the load meter after start-up;
   d) Copy of the performance test results; and
   e) The rolling twelve total for the hours of operation for each calendar month.

   [County Rule 210 §302.1(b)]

2) The Peak Shaving Generator will be monitored for proper operation and compliance with the emission limits of all permit conditions by taking a reading once a month, within the first 5 days of the start of the month following all months the Peak Shaving Generator is operated, while it is in operation, of the following:
   a) The reading of the dedicated fuel meter;
   b) The reading of the electrical output meter; and
   c) The date the readings were taken.

   [County Rule 210 §302.1(b)]

   The Permittee shall contemporaneously record these readings in a permanent log kept near the equipment, available for inspection. The Permittee shall include the calculation of the ratio of electrical output to fuel consumption as an indicator of Peak Shaving Generator efficiency. The Permittee shall also include the total hours of operation of the Peak Shaving Generator for the most recent 12-month period.

   [County Rule 210 §302.1(b)]

3) The Permittee shall conduct a weekly facility walk-through and observe visible emissions from any source capable of emitting any air contaminant, other than uncombined water, to the ambient air. This includes but not limited to test cells, boilers, abrasive blasting units, thermal sprays, air heaters and furnaces.

   [County Rule 300] [County Rule 210 §302.1c(1)] [SIP Rule 30]

4) The Permittee shall log the following information for all visible emissions observations and Method 9 opacity readings required by this permit:
   a) The date and time the visible emissions observation or Method 9 opacity reading was taken;
   b) The name of the observer;
   c) Whether or not visible emissions were present;

d) If visible emissions are present and the controls and facility processes are operating in a mode other than their normal operating conditions, such as startup or shutdown, a description of the operating conditions at the time that the opacity is observed;
e) The opacity determined by a Method 9 opacity reading, if a Method 9 reading is required by these permit conditions;
f) If applicable, a description of any corrective action(s) taken, including the date of such action(s); and
g) Any other related information.

[County Rule 300] [County Rule 210 §302.1]

5) If visible emissions, other than uncombined water, are observed being discharged into the ambient air, the Permittee shall monitor for compliance with the opacity standards specified in this permit by having a certified visible emissions evaluator determine the opacity of the visible emissions being discharged into the ambient air using the techniques specified in EPA Reference Method 9.

[County Rule 210 §302.1(b)]

6) If the Permittee has not received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of visible emissions, the initial Method 9 opacity reading shall be taken within three days of observing visible emissions. If the Permittee has received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of emissions, the initial Method 9 opacity reading shall be taken within one day of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next day that the emitting equipment is in operation. If the problem causing the visible emissions is corrected before the initial Method 9 opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity readings.

[County Rule 210 §302.1(b)]

7) Follow-up Method 9 opacity readings shall be performed by a certified visible emissions evaluator while the emitting equipment in its standard mode of operation in accordance with the following schedule:

Daily:

a) Except as provided in paragraph 3 of this Permit Condition, a Method 9 opacity reading shall be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 readings have occurred.
b) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly, in accordance with paragraph 2 of this Permit Condition.

Weekly:

a) If the permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the equipment is operated.

b) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with paragraph 1 of this Permit Condition.

c) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of paragraph 3 of this Permit Condition are met.

[County Rule 210 §302.1(b)]

8) Cease Follow-up Method 9 Opacity Monitoring:
Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure.

[County Rule 210 §302.1(b)]

9) Opacity Readings

a) Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.

[40 CFR 60.11.b] [County Rule 300 §501]

b) Opacity of visible emissions from intermittent sources as defined by County Rule 300 §201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 25 consecutive readings shall be required at 15-second intervals for the averaging time.

[County Rule 300 §502][Locally enforceable only]

10) The Permittee shall maintain on site and available for inspection manufacturer's operating specifications or rebuilder's operating guidelines.

[County Rule 210 §302.1(b)]

11) The Permittee shall keep all records of maintenance and repair activities done on the Peak Shaving Generator.

[County Rule 210 §302.1(b)]

E. Reporting Requirements

All reports required by these permit conditions shall be submitted to the Maricopa County Environmental Service Department, Air Quality Division, Attn: Large Source Compliance Supervisor, unless otherwise directed.

For the reporting requirements of these permit conditions, "prompt" shall be defined as two calendar days.

1) Semi-Annual Reporting Requirements:
Specific elements that will be summarized, and the information to be reported, are as follows:

a) Hours of Operation: The Permittee shall submit a copy of the log including:

(1) The dates and hours of operation of the Peak Shaving Generator for the six-month period;

(2) The rolling twelve month total for the hours of operation for each calendar month for the most recent 12-month period;

[County Rule 210 §302.1(e)]

b) Opacity

The Permittee shall include the following in each semi-annual Compliance Report:

(1) The dates of any week that the required visible emissions observations were not taken, an explanation for the deviation from the monitoring requirement, and a description of any action taken to ensure that future observations are performed, if applicable;
(2) The source and location from which visible emissions were observed;
(3) Any date which visible emissions were observed;
(4) The approximate time of the observation;
(5) The name of the observer;
(6) A description of any corrective actions taken, if any, to reduce the visible emissions; and
(7) If a follow-up Method 9 reading was required, the opacity of the emissions determined by Method 9, a copy of the visual determination of opacity record showing all information required by the Method and any other related information.

[County Rule 210 §302.1(e)]

c) Emission Limits

The Permittee shall submit a list of:

(1) The monthly readings of the dedicated fuel meter;
(2) The daily readings of the load meter;
(3) The dates the readings were taken; and
(4) The calculations of the ratio of electrical output to fuel consumption as an indicator of Peak Shaving Generator efficiency.

[County Rule 210 §302.1(e)]

d) Odor Control

The Permittee shall submit the results of investigations performed in response to odor or air pollution complaints and any corrective actions taken.

[County Rule 210 §302.1(e)]

e) Maintenance

The Permittee shall include in the six-month summary reports of all maintenance and repair activities performed on the Peak Shaving Generator.

[County Rule 210 §302.1(e)]

f) The Permittee shall include in the six-month summary reports clearly identifying all instances of deviations from these permit conditions.

[County Rule 210 §302.1(e)]

g) If the peak shaving generator has not been in use for the entirety of the previous six month reporting period, a statement of the fact in combination with a

certification of truth accuracy and completeness will satisfy all reporting requirements for this section (23) of the Title V Permit.

[County Rule 210 §302.1(e)]

24. **INTERNAL COMBUSTION SOURCES**: Soil Vapor Extraction System (SVE) at Building 353
The following permit conditions apply to the Ford 460 CID 0.419 MMBtu/hr internal combustion engine (ICE) powered by propane and used to extract and combust diesel and JP-8 vapors, located at Building 353.

A. Allowable Emissions Limitations
The Permittee shall not discharge more than 15 pounds (6.8 kg) of volatile organic compounds into the atmosphere in any one day from any SVE unit in which any volatile organic compound or any material containing a volatile organic compound comes into contact with flame or is evaporated at temperatures exceeding 200^{o}F (93.3^{o}C), in the presence of oxygen, unless the entire amount of such discharge has been reduced as follows:

90 percent or more of the carbon in the volatile organic compounds entering the incineration device is oxidized to carbon dioxide and overall control efficiency (capture plus processing) is at least 85 percent by weight

[County Rule 330 §304.1] [SIP Rules 32 & 34]

B. Operational Limitations and Standards
1) The Permittee shall use only pipeline quality propane or natural gas to supplement the soil gas vapor to fire the internal combustion engine. The exhaust from the internal combustion engine shall be vented to the catalytic converter without bypass.

[County Rule 210, §302.1 (b)]

2) The Permittee shall operate the Soil Vapor Extraction unit without bypass to the internal combustion engine that achieves a ninety-nine percent destruction efficiency of volatile organic compounds.

[County Rule 210, §302.1 (b)]

C. Monitoring and Recordkeeping Requirements
1) The Permittee shall monitor the destruction efficiency monthly by sampling the influent and effluent of the internal combustion engine to be analyzed by a State of Arizona Certified Environmental Laboratory. The VOC content of both samples shall be measured to quantify the destruction efficiency of the control device. All records of these analyses shall be kept for a period not less than 5 years.

For each month that both the SVE and the ICE were not in operation, a brief statement certifying this fact can substitute for the lab analysis.

[County Rule 210, §302.1 (b)]

2) If the samples of the VOC emissions show that the destruction efficiency is less than 99%, the ICE shall be shutdown until calibration of the equipment, followed by a lab analysis to be performed. A ninety-nine percent destruction efficiency must be achieved and documented before the start of normal operations.

[County Rule 210, §302.1 (b)]

3) The Permittee shall maintain records of all the parameters that are monitored continuously by the Phoenix 100 controller set forth in the approved attached O&M Plan in Appendix E. The Permittee shall maintain all of the specified records for a total of five years and shall make them available to the County upon request.

[County Rule 330, §503.3] [County Rule 210, §302.1 (d)]

D. Reporting Requirements

The Permittee shall submit a semi-annual monitoring report, which shall be certified as to its truth, accuracy and completeness by a responsible official in the manner required by County Rule 210 §§301.7 and 305.1(e), and which shall contain the following information, at a minimum:

1) Copies of the monthly lab analysis reports showing the destruction efficiency for each month of the semi-annual report.
2) For each month that both the SVE and the ICE were not in operation, a brief statement certifying this fact can substitute for the lab analysis.
3) For each month that the destruction efficiency was shown to be less than ninety-nine percent, a summary including all dates of when the operation of the ICE and the SVE was stopped, a description of the corrective action taken and the post corrective action lab analysis showing a compliant efficiency.

[County Rule 210, §302.1 (b)]

25. WASTE WATER TREATMENT PLANT

A. Allowable Emission Limitations**:**

The Permittee shall not emit hydrogen sulfide (H_2S) in such a manner or amount that the concentration of such emissions into the ambient air at any occupied place beyond the premises on which the source is located exceeds 0.03 parts per million by volume (ppmv) for any averaging period of 30 minutes or more.

[County Rule 320 §304][SIP Rule 32]

B. Operational Limitations and Standards:

1) Gaseous and Odorous Emissions: The Permittee shall not emit gaseous or odorous air contaminants from equipment, operations, or premises under his control in such quantities or concentrations as to cause air pollution.

[County Rule 320 §300][SIP Rule 32]

2) Material Containment Required: Materials including, but not limited to, solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices or equipment shall be mandatory.

[County Rule 320 §302][SIP Rule 32]

3) Stack Requirements: Where a stack, vent or other outlet is at such a level that air contaminants are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet to a degree that will adequately dilute, reduce or eliminate the discharge of air contaminants to adjoining property.

[County Rule 320 §303] [SIP Rule 32]

C. Monitoring and Recordkeeping Requirements:

1) Odor Log

The Permittee shall maintain a log of complaints of odors detected off-site. The log shall contain a description of the complaint, date and time that the complaint was received, and if given, name and/or phone number of the complainant. The logbook shall describe what actions were performed to investigate the complaint, the results of the investigation, and any corrective actions that were taken.

[County Rule 210 §302.1.c.(2)] [locally enforceable only]

2) Odor Monitoring

The Permittee shall retain records of all property line odor monitoring that is conducted at the facility. The records shall contain the results of all the H2S sampling including the location, time each sample was taken, measured H2S concentrations, whether any noticeable odors were present, the general direction and estimated speed of the wind at the time the readings were taken and appropriate comments.

[County Rule 210 §302.1.c.(2)] [locally enforceable only]

D) Reporting:

The Permittee shall submit a semi-annual monitoring report, which shall be certified as to its truth, accuracy and completeness by a responsible official in the manner required by County Rule 210 §§301.7 and 305.1(e), and which shall contain the following information, at a minimum:

1) Odor Log

The Permittee shall include a copy of the portion of the odor log that covers the applicable 6 month reporting period. If no complaints were received during the reporting period, a statement to that effect may be substituted for the copy of the odor log.

[County Rule 210 §302.1e(1)][County Rule 320]

2) Odor Monitoring

The Permittee shall include records of any property line H_2S monitoring required by Permit Condition 25.C.2.

[County Rule 210 §302.1e(1)][County Rule 220]

E. Testing:

As required by the Department, the Permittee shall perform Reference Test Method 15 to determine compliance with the H_2S limitation.

If the Division or the Permittee log more than three off-site odor complaints pursuant to Permit Condition [25. C. 1] during any four consecutive weeks, the Permittee shall conduct property line monitoring for H_2S within 48 hours of receiving the third complaint or within 48 hours of being notified of a third complaint by the Division. The Permittee shall notify the

Control Officer, Attn: AQ Technical Services Manager, by telephone or in writing at least 24 hours in advance of conducting the required monitoring.

The monitoring shall be performed using a portable H_2S gas analyzer approved by the Control Officer, with the capability to detect H_2S at concentrations in the parts per billion by volume (ppbv) range. The analyzer shall be calibrated and operated in accordance with the manufacturer's operating instruction book.

Monitoring shall be conducted at a minimum of 12 locations of equal spacing along the property line of the facility (approximately every 1/2 mile) and shall be collected from between three and six feet above ground surface. The monitoring period for each location shall be a period of ten (10) minutes and the period shall begin as soon as possible after the tester arrives at the sampling location.

If odors are detectable when the tester arrives at a monitoring location, three readings shall be taken at roughly five-minute intervals.

If no odors are detectable when the tester arrives at a monitoring location, the tester shall not immediately begin to take readings.

a) If odors become noticeable during the ten-minute monitoring period, the tester shall take three readings that are evenly spaced over the remainder of the ten-minute monitoring period.
b) If no odors are detectable during the first nine minutes of the sampling period, then the three required readings shall be taken during the final minute of the monitoring period.

If the property line monitoring shows an average H_2S concentration of 0.03 ppmv or higher at any of the monitoring locations, the Permittee shall implement a plan to control the H_2S emissions within seven calendar days. Upon implementation of the odor control plan, the Permittee shall monitor property line concentrations weekly until three weeks of data indicate the H_2S emissions have been controlled to 0.03 ppmv or less. The Permittee shall submit a report of complaints and of actions taken to implement the odor control plan within 14 calendar days of receiving complaints.

[County Rule 270 §408]

26. EXTERNAL COMBUSTION SOURCES:

A. Affected Sources

1) The following permit conditions apply to the following emission sources:
   a) Boilers (including the 3.5 MMBtu/hour low-NO_x boiler at Bldg. 820); and
   b) Space heaters and hot water heaters.

B. Allowable Emission Limits

The Permittee shall not discharge or cause or allow the discharge of particulate matter emissions, caused by combustion of fuel, from any fuel burning operation in excess of amounts determined by the following equation:

$$E = 1.02\ Q^{0.769}$$

Where:
E = The maximum allowable emission rate in pounds-mass per hour, and

Q = The heat output in million BTU per hour.

[SIP Rule 311 §304.1]

C. Operational Limitations and Standards:
The Permittee shall not use any fuel that contains greater than 0.05% sulfur by weight in any permitted equipment at the facility.

[County Rule 320 §306.4]

D. Monitoring and Recordkeeping Requirements

1) The Permittee shall conduct a weekly facility walk-through and observe visible emissions from any source capable of emitting any air contaminant, other than uncombined water, to the ambient air. The Permittee shall log the visual observations, including the date and approximate time when that reading, location of visible emissions or a statement that no visible emissions were observed, name of the person who took the observation and any other related information.

[County Rule 300] [County Rule 210 §302.1c(1)] [SIP Rule 30]

2) The Permittee shall log the following information for all visible emissions observations and Method 9 opacity readings required by this permit:
   a) The date and time the visible emissions observation or Method 9 opacity reading was taken;
   b) The name of the observer;
   c) Whether or not visible emissions were present;
   d) If visible emissions are present and the controls and facility processes are operating in a mode other than their normal operating conditions, such as startup or shutdown, a description of the operating conditions at the time that the opacity is observed;
   e) The opacity determined by a Method 9 opacity reading, if a Method 9 reading is required by these permit conditions;
   f) If applicable, a description of any corrective action(s) taken, including the date of such action(s); and
   g) Any other related information.

[County Rule 300] [County Rule 210 §302.1]

3) If visible emissions, other than uncombined water, are observed being discharged into the ambient air, the Permittee shall monitor for compliance with the opacity standards specified in this permit by having a certified visible emissions evaluator determine the opacity of the visible emissions being discharged into the ambient air using the techniques specified in EPA Reference Method 9.

If the Permittee has not received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of visible emissions, the initial Method 9 opacity reading shall be taken within three days of observing visible emissions. If the Permittee has received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of emissions, the initial Method 9 opacity reading shall be taken within one day of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next day that the emitting

equipment is in operation. If the problem causing the visible emissions is corrected before the initial Method 9 opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity readings.

Follow-up Method 9 opacity readings shall be performed by a certified visible emissions evaluator while the emitting equipment in its standard mode of operation in accordance with the following schedule:

Daily:

a) Except as provided in paragraph 3 of this Permit Condition, a Method 9 opacity reading shall be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 readings have occurred.
b) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly, in accordance with paragraph 2 of this Permit Condition.

Weekly:

a) If the permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the equipment is operated.
b) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with paragraph 1 of this Permit Condition.
c) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of paragraph 3 of this Permit Condition are met.

4) Cease Follow-up Method 9 Opacity Monitoring:
Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure.

[County Rule 210 §302.1c]

5) Opacity Readings

a) Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.

[40 CFR 60.11.b] [County Rule 300 §501]

b) Opacity of visible emissions from intermittent sources as defined by County Rule 300 §201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 25 consecutive readings shall be required at 15-second intervals for the averaging time.

[County Rule 300 §502][Locally enforceable only]

E) Reporting
The Permittee shall include the following in each semi-annual Compliance Report:

1) The dates of any week that the required visible emissions observations were not taken, an explanation for the deviation from the monitoring requirement, and a description of any action taken to ensure that future observations are performed, if applicable;
2) The source and location from which visible emissions were observed;
3) Any date which visible emissions were observed;
4) The approximate time of the observation;
5) The name of the observer;
6) A description of any corrective actions taken, if any, to reduce the visible emissions; and
7) If a follow-up Method 9 reading was required, the opacity of the emissions determined by Method 9, a copy of the visual determination of opacity record showing all information required by the Method and any other related information.

[County Rule 210 §302.1e]

27. SPRAY PAINTING OPERATIONS:

A. Affected Sources

These permit conditions apply to the spray painting operations basewide.

B. Controls required for Equipment Operated in Enclosures Located Outside a Building

Spray coating equipment shall be operated inside an enclosure which has at least three sides a minimum of eight feet in height and able to contain any object or objects being coated.

1) Three-Sided Enclosures

Spray shall be directed in a horizontal or downward manner so that overspray is directed at the walls or floor of the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of the top of the enclosure.

[County Rule 315 §301.1(a)] [Locally enforceable only]

2) More Complete Enclosures

For enclosures with three sides and a roof or complete enclosures, spray shall be directed into the enclosure so that the overspray is directed away from any opening in the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of the top of the enclosure.

[County Rule 315 §301.1(b)] [Locally enforceable only]

C. Equipment Operated With Forced Air Exhaust Vented Directly Outside

The Permittee's spray booths must have a filtering system with an average overspray removal efficiency of at least 92% by weight for the type of material being sprayed. No gaps, sags or holes shall be present in the filters and all exhaust must be discharged into the atmosphere.

[County Rule 315 §301.2] [SIP Rule 30]

D. Exemptions

These permit conditions do not apply to:

1) The spray coating of buildings or dwellings, including appurtenances and any other ornamental objects that are not normally removed prior to coating;

[County Rule 315, §302.1][Locally enforceable only]

2) The spray coating of facility equipment or structures that are fixed in a permanent location and cannot be easily moved into an enclosure or spray booth and which are not normally dismantled or moved prior to coating;

[County Rule 315, §302.2] [Locally enforceable only]

3) The spray coating of objects which cannot fit inside of an enclosure with internal dimensions of 10 feet wide by 25 feet long by 8 feet high;

[County Rule 315, §302.3] [Locally enforceable only]

4) To enclosures and spray booths and exhausts located entirely within a completely enclosed building, providing that any vents or openings do not allow overspray to be emitted into the outside air; and

[County rule 315, §302.4] [Locally enforceable only]

5) Any coating operations utilizing only hand-held aerosol cans.

[County Rule 315 §302.5] [Locally enforceable only]

28. FUEL STORAGE TANKS:

A. Affected Sources:

1-233,300 gallon JP-8 tank (Bldg. # 359), 1-50,000 gallon diesel tank (Bldg. #367), 1-25,000 gallon JP-8 tank (Bldg. #366), 1-1,629,377 gallon JP-8 tank (Bldg. #356), 1-413,779 gallon JP-8 tank (Bldg. #351), 1-233,193 gallon JP-8 tank (Bldg. #350).

1) Operational Limitations:

The Permittee **shall <u>not</u>** store any volatile organic liquid (VOL) in these storage tanks that:

a) Have a true vapor pressure greater or equal to 15.0 kPa for a tank with a capacity greater than or equal to 75 m^3 (19,812 gallons) but less than 150 m^3 (39625 gallons) or

b) Have a true vapor pressure greater or equal to 3.5 kPa for a tank with a capacity greater than or equal to 151 m^3

[40 CFR 60 §110b][County Rule 360 §301.7]

c) Have a true vapor pressure greater than 1.5 psia

[County Rule 350 §201][SIP Rule 202]

2) Monitoring and Record Keeping:

a) The Permittee for each the storage vessels shall keep copies of records readily accessible showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept for the life of the source.

[40 CFR 60 Subpart Kb §116(a)(b)][County Rule 360 §301.7]

b) The Permittee for each the affected storage vessels shall keep copies of records readily accessible showing the contents for each of the storage vessels and a technical data sheet or MSDS showing the true vapor pressure for each of the stored liquids. These records shall be retained for at least 5 years. Records of the past 12 months shall be in a readily accessible location and must be made available to the County without delay upon verbal or written request.

[County Rule 210 §302.1]

c) At the request of the Control Officer, the Permittee shall test the true vapor pressure of the volatile organic liquid stored in the affected storage tanks. The Reid vapor pressure shall be determined using American Society for Testing and Materials (ASTM) Method D 323-90.

[County Rule 210 §302.1]

3) Reporting:
The Permittee of each storage vessel shall notify the Department within 5 working days when the maximum true vapor pressure exceeds the limits specified in Permit Condition [28. A. 1)]

[County Rule 210 §302.1]

B. Above and Below Ground Gasoline Tanks, (ASTs)

1) Affected Sources
This section of the permit applies to the following tanks:
a) Horizontal ASTs at Bldg. 177 (4 tanks) and Bldg. 2201 (1 tank)
b) UST at Bldg. 335

2) Operational Limitations and Standards
a) Fill Pipes
(1) Each fill pipe into the tank shall be equipped with a permanent submerged fill pipe that has a discharge opening which is completely submerged when the liquid level is 6 inches above the tank bottom. Threads, gaskets, and mating surfaces of the fill pipe assembly shall be designed and maintained tight. There shall be no liquid or vapor leakage at the joints of the assembly.

[County Rule 353 §302.1(a)] [Locally enforceable]

(2) The Permittee shall prevent driver/deliverers from connecting the delivery hose coupling to a fill pipe coupling with so much twisting force that the fill pipe assembly is loosened. One method of complying is to have a California Air Resources Board (CARB)-certified swivel coupling as part of the fill pipe assembly. See County Rule 353 §503.4 for CARB related information.

[County Rule 353 §302.1b] [Locally enforceable only]

(3) Fill pipe caps shall have a securely attached, intact gasket. The cap and its gasket shall always function properly, latch completely so that it cannot then be easily twisted by hand, and have no structural defects. The cap of a gasoline fill pipe shall always be fastened securely on the fill pipe except immediately before, during, and immediately after:
(a) "Sticking" the tank to measure gasoline depth.
(b) Delivering gasoline into the tank.
(c) Conducting testing, maintenance or inspection on the gasoline/vapor system.
Pipe caps shall not be unfastened or removed unless every other fill pipe is either securely capped or connected to a delivery hose.

[County Rule 353 §302.2] [Locally enforceable only]

(4) Gasoline storage and receiving operations shall be leak free. Specifically, no liquid gasoline escape of more than 3 drops per minute is allowed. This includes leaks through the walls of piping, fittings, fill hose(s), and vapor hose(s). There shall be no excess gasoline drainage from the end of a fill hose or a vapor hose. Specifically, not more than 2 teaspoonfuls of gasoline shall be lost in the course of a connect or disconnect process.

[County Rule 353 §301.2] [SIP Rules 353 &301.3]

(5) Spill containment systems such as recessed basins surrounding the tank fill neck, including gaskets shall be kept vapor-tight. The outer surface of the spill containment basin shall have no holes or cracks and shall not allow vapors to pass from the dispensing tank through it to the atmosphere. Spill containment receptacles shall be kept clean and free of foreign material at all times.

[County Rule 353 §301.3(a)] [Locally enforceable only]

b) Spill Containment

If the spill containment is equipped with a passageway to allow material trapped by the containment system to flow into the interior of the dispensing tank the passageway shall be kept vapor tight at all times unless in use. Any plunger/stopper assembly shall be checked to ensure that it is unimpeded and sealing correctly. The bottom of the receptacle shall be designed and kept such that no puddles of gasoline are left after draining through the passageway has ceased. The Permittee is responsible for assuring that before a delivery vessel leaves the premises after a delivery any gasoline in a dispensing tank's spill containment receptacle has been removed. Any gasoline that the Permittee has taken out of a spill receptacle as a free liquid or as absorbed into/onto other material removed from the receptacle shall be contained in such a way that VOC emission is prevented. Disposal in conformance with applicable hazardous waste rules is sufficient to meet this requirement.

[County Rule 353 §301.3(b)] [Locally enforceable only]

3) Requirements for Tank Vapor Loss Control Devices

a) All vapor loss control equipment shall be installed as required, operated as recommended by the manufacturer, and maintained leak free, vapor tight and in good working order. Both the Permittee and the driver/operator of a delivery vessel shall have responsibility to assure that vapor recovery equipment is properly connected and in use at all times while gasoline is actively being dropped/delivered. The Permittee shall refuse delivery of gasoline from a delivery vessel that does not bear a current pressure test certification decal issued by the County. This provision does not apply during times when the facility is unattended or there is only one person under control of the dispensing facility present. On coaxial systems, both spring-loaded and fixed coaxial fill tubes shall be maintained according to the standards of their manufacturer(s) and be

operated so that there is no obstruction of vapor passage from the tank to the delivery vessel.

[County Rule 353 §304] [SIP Rule 33A]

b) Gasoline vapors displaced from a dispensing tank by gasoline being delivered shall be handled by a Stage Vapor Recovery System meeting the specification described in County Rule 353 §303.2

[County Rule 353 §§303 & 503.4] [SIP Rule 33A]

c) No vapor or liquid shall escape through the dispensing tank's outer surfaces or from any of the joints where the tank is connected to pipe(s), wires, or other systems. Gasoline delivery operations shall be vapor tight. "Vapor tight" is defined as a condition in which an organic vapor analyzer (OVA) or a combustible gas detector (CGD) at a potential VOC leak source shows either less than 10,000 ppm when calibrated with methane, or less than 1/5 of the lower explosive limit, when prepared according to the manufacturer and used according to County Rule 353 §504.3.

[County Rule 353 §§218 & 301.1(a)] [SIP Rule 33A]

d) In addition to delivery operations, tanks and their fittings shall be vapor tight as well except for the outlet of a pressure/vacuum relief valve on a dispensing tank's vent pipe. Specifically, this means that at a probe tip distance of 1 inch (2.5 cm) from a surface, no vapor escape shall exceed 1/5 of the lower explosive limit. This applies to tanks containing gasoline regardless of whether they are currently being filled, and to caps and other tank fittings.

[County Rule 353 §§218 & 301.1(b)] [SIP Rule 33A]

e) Overfill prevention equipment shall be vapor tight to the atmosphere. Any device mounted within the fill pipe shall be so designed and maintained that no vapor from the vapor space above the gasoline within the tank can penetrate into the fill pipe or through any of the fill pipe assembly into the atmosphere.

[County Rule 353 §302.5] [SIP Rule 33A]

4) Vapor Loss Control Measures Required:

The Permittee shall not transfer or permit the transfer of gasoline from any delivery vessel into a stationary dispensing tank located above or below ground with a capacity of more than 250 gallons unless the following conditions are met:

a) Submerged Fill Pipe:
Stationary dispensing tanks shall be equipped with a permanent submerged fill pipe.

b) Vapor Recovery System:
The displaced gasoline vapors or gases shall be handled by an Approved Stage I Vapor Recovery System.

c) Leaking Limits:
Delivery operations shall be leak free and vapor tight. Disconnects of gasoline delivery hoses shall be done without excess organic liquid (gasoline) drainage.

[SIP Rule 353 §301]

5) Equipment Maintenance and Use Required:

All vapor loss control equipment shall be installed as required, operated as recommended by the manufacturer and maintained leak free, vapor tight and in good working order:

a) Both the owner/operator of the vessel delivering the gasoline to the fuel dispensing tank, equipped with a vapor recovery, and the Permittee (owner of the tank) shall have the responsibility to assure that proper vapor recovery equipment is connected during every such delivery.

b) The Permittee shall refuse delivery of gasoline from a delivery vessel which does not bear a current pressure test certification decal issued by the Control Officer.

c) Both spring loaded and fixed coaxial fill tubes shall be maintained and operated so that there is no obstruction of vapor passage from the tank to the delivery vessel.

[SIP Rule 353 §302]

6) Monitoring and Recordkeeping Requirements

a) The Permittee must inspect the following weekly:

(1) External fittings of tank fill pipe assemblies and vapor valves to assure that cap, gasket, and piping are intact and are not loose.

[County Rule 302.1b] [Locally enforceable only]

(2) Spill containment receptacles for fuel accumulation.

[County Rule 353 §301.3 a (3)] [Locally enforceable only]

b) The Permittee will keep weekly records of fill pipe, vapor valve, and spill containment inspection to be kept. The findings of such weekly inspections shall be permanently entered in a record or logbook by the end of Saturday of the following week. These records and any reports or supporting information required by this rule or by the County shall be retained for at least 5 years. Records of the past 12 months shall be in a readily accessible location and must be made available to the County without delay upon verbal or written request.

[County Rule 353 §502] [Locally enforceable only]

C. Bulk Plants and Terminals

1) Affected Sources

This section of the permit applies to the internal floating roof, AST located at Bldg. 368

2) Operational Limitations and Standards

a) Fill Pipes

(1) The tanks must be fitted with submerged fill pipes and a pressure/vacuum valves that are set within ten percent of the tanks' maximum, safe working-pressure.

[County Rule 350 §301] [SIP Rule 350 §301]

(2) Tanks and all required emission control equipment shall be properly installed, properly maintained and be properly operating.

[County Rule 350 §309.2] [SIP Rule 350]

b) The tank shall be equipped with a vapor recovery system that collects and returns displaced vapors to the delivery vessel using vapor tight fittings and lines.

[County Rule 350 §302] [SIP Rule 350 §302]

c) The tank and all required emission control equipment shall be properly installed, properly maintained and be properly operating.

[County Rule 350 §309.2] [SIP Rule 350 §309.2]

d) Fuel Transfers

(1) Transfer to Fuel Tank

The Permittee shall not transfer gasoline from a delivery vessel into a tank exceeding 250 gallons capacity unless the delivery vessel bears a current county pressure-test decal and uses a vapor balance system equipped with fittings which are vapor tight.

[County Rule 351 §301.2(a)] [SIP Rule 351 §301.2(a)]

(2) Transfer from Fuel Tank

The Permittee shall not transfer gasoline from a a tank exceeding 250 gallons capacity into a delivery vessel into unless the loading rack and the delivery vessel use a vapor balance system equipped with fittings which are vapor tight;

[County Rule 351 §301.2(b)] [SIP Rule 351 §301.2(b)]

e) Requirements for Tank Vapor Loss Control Devices

(1) Loading shall be accomplished in a manner that prevents the gauge pressure from exceeding 18 inches of water (33.6 mm Hg) and vacuum from exceeding six inches of water (11.2 mm Hg) in the tank truck. The Permittee shall act to ensure that the vapor recovery system required by this permit condition is connected between the delivery vessel and the storage tank during all fuel transfers.

[County Rule 351 §302.1] [SIP Rule 351 §302.1]

(2) Loading shall be accomplished in a manner that prevents overfills, fugitive liquid leaks or excess organic liquid drainage. LAFB personnel shall observe all parts of the transfer and shall discontinue the transfer if any leaks are observed. Measures shall be taken to prevent liquid leaks from the loading device when it is not in use, and to complete drainage before the loading device is disconnected. During loading or unloading operations, potential leak sources shall be vapor tight as demonstrated by the test procedure described below.

[County Rule 351 §302.2] [SIP Rule 351 §302.2]

(3) Loading operations shall be accomplished in such a manner that the displaced vapor and air will be vented only to the vapor collection/processing system, which shall be operated gas-tight and in a manner such that the vapor processing capacity is not exceeded. Diaphragms used in vapor storage tanks shall be maintained gas-tight.

[County Rule 351 §302.3] [SIP Rules 351 §302.3]

(4) Vapor transfer lines shall be equipped with fittings that are vapor tight and that automatically and immediately close upon disconnection. Vapor balance systems shall be designed to prevent any vapors collected at one loading rack from passing to another loading rack.

[County Rule 351 §302.4] [SIP Rule 351§302.4]

f) Repair and Retesting Requirement

If a vapor recovery equipment failure results in emissions that exceed the standards of this permit, the Permittee shall notify the County and observe the following time schedule in correcting the failure:

(1) Concentrations at or above the lower explosive limit must be brought into compliance within 24 hours of detection.

(2) Leak concentrations exceeding 10,000 ppm but less than 50,000 ppm, as methane for vapor collection/processing equipment subject to gas-tight standard shall be brought into compliance within 5 days of detection.

(3) Leaks must be tested after presumed leak-correction within 15 minutes of recommencing use; if leak standards are exceeded in this test, the use of the faulty equipment shall be discontinued within 15 minutes until correction is verified by retesting.

[County Rule 351 §303] [SIP Rule 351 §303]

g) Equipment Maintenance and Operating Practices

All equipment associated with delivery and loading operations shall be maintained to be leak free, vapor tight and in good working order. Gasoline shall not be spilled, discarded in sewers, stored in open containers, or handled in any other manner that would result in evaporation to the atmosphere. Purging of vapors is prohibited.

[County Rule 351 §304] [SIP Rule 351§304]

3) Monitoring and Recordkeeping Requirements

The total amount of gasoline received each month shall be recorded by the end of the following month. The Permittee shall keep accurate records of liquids stored in such tanks including either the true or the Reid vapor pressure ranges of each such liquid. The temperature of the contents of each affected tank located at bulk terminals shall be recorded at least weekly and the true vapor pressure of each shall be recorded at least once each month. These records shall be kept a minimum of five years.

[County Rule 350 §501] [SIP Rules 350 §501]

4) Administrative Requirements

a) The Permittee shall make the primary seal envelope available for inspection by the Control Officer. However, if prior thereto the secondary seal is removed or if the tank is drained and cleaned by the Permittee for any reason, it shall be made available for such inspection at that time. The Permittee shall provide notification to the Control Officer no less than 7 working days prior to removal of the secondary seal. The Permittee shall perform a complete inspection of the primary seal and the floating roof, including measurement of the gap area and

maximum gap, whenever the tank is emptied for non-operational reasons or at least every five years, whichever is more frequent.

[County Rule 350 §4011] [SIP Rule 350 §403]

b) The Permittee shall perform monthly inspections, while vapor is being transferred, for liquid and vapor leaks and for faulty equipment. In these monthly inspections detection methods incorporating sight, sound, smell and/or touch may be used.

[County Rule 351 §400] [SIP Rule 351 §400]

c) A log book shall be signed by the owner or operator at the completion of each monthly inspection for equipment leaks. A section of the log shall contain a list, summary description, or diagram(s) showing the location of all equipment in gasoline service at the facility.

[County Rule 351 §401] [SIP Rule 351 §401]

5) Exemptions

a) The floating roof is exempt from the requirement that its roof be floating: when the tank is being drained completely and when it is being filled, as long as both processes are accomplished continuously and as rapidly as practicable.

b) When VOC vapors from organic liquids are present within a non-exempt delivery vessel, the Permittee and its contractors may open vapor containment equipment while performing operations required by County rules or by other statutory entities, but shall be restricted as follows unless approved in advance by the County:

(1) Wait at least 3 minutes after on-loading is complete or delivery vessel has stopped before opening hatch or other vapor seal.
(2) Close hatch or other sealing device within 3 minutes of opening.
(3) Limit windspeed at opened hatch or other opened sealing device to not more than 3 mph (1.34 m/sec).

[County Rule 351 §305.2] [SIP Rule 351 &305.2]

6) Testing Requirements

Leak detection tests shall be conducted annually according to procedures in MCAPCR Rule 351 §501, except that EPA Method 21 shall be used to test for leaks from a vapor collection/ processing unit and its associated piping outside the loading area. Equipment shall conform to the specifications of those test methods cited in MCAPCR Rule 351 §504.2. Prior to testing, the owner shall notify the Department of the date, time and location of the testing. The County or its representatives shall, at their discretion, observe the tests.

[County Rule 351 §401.1] [SIP Rule 351 §401.3]

29. GASOLINE DELIVERY VESSEL TESTING AND USE:

A. Affected Sources:

1,200-gallon delivery vessel, C-300.

B. Leak and Spill Prevention

1) The Permittee shall not store or transport gasoline in or otherwise use or operate any gasoline delivery vessel unless such vessel is designed and maintained to be vapor tight and leak free.

[County Rule 352 §301.1][locally enforceable only]

2) The driver/operator of a gasoline delivery vessel shall:
   a) Thoroughly drain a fill hose and a vapor recovery hose into the dispensing tank before disconnecting it from the tank's fittings;
   b) Connect and disconnect fill hoses and vapor recovery hoses in such a way as to prevent excess gasoline drainage (more than 2 teaspoonsful) from escaping from the hose in one connect/disconnect cycle; and
   c) Spills and any gasoline that is deposited in or on an area other than within the dispensing tank shall be collected and contained. This can include, but is not limited to, the correct use of buckets and/or absorbent material designed for the purpose, and the correct disposal of the collected gasoline.

[County Rule 352 §301.3][locally enforceable only]

3) For gasoline dispensing tanks that are equipped with a Stage 1 vapor recovery system (VR System):
   a) During delivery, the vessel operator shall not remove the lid of a fill tube unless every other fill tube either has a lid fastened in place or a delivery hose connecting it to the delivery vessel.
   b) Connect a vapor recovery hose before connecting any gasoline delivery hose.
   c) Disconnect a delivery hose from a tank before disconnecting the vapor recovery hose.
   d) Restriction on Multiple Connections:
      A delivery vessel shall not simultaneously have more than one gasoline delivery hose connected, unless each delivery hose is connected to a dispensing tank's 2-point system that already has a vapor hose connecting it to the vessel.

[County Rule 352 §301.5] [locally enforceable only]

4) If a delivery vessel's vapor hose is connected to a vapor return line that is not part of a 2-point system, then there shall not be more than one gasoline delivery hose connected to the vessel, and no other hoses connected to a fill tube; viz., no more than one compartment of the delivery vessel shall be emptied at a time.

[County Rule 352 §301.6] [locally enforceable only]

5) A gasoline delivery vessel shall first pass the MC Pressure Test before delivering or onloading gasoline within Maricopa County, and to continue, must pass the MC Pressure Test each year thereafter. This does not apply to loads that originate solely in another state, nor to loads originating in Maricopa County that are not delivered in Maricopa County.

[County Rule 352 §302] [locally enforceable only]

6) The MC Pressure Test shall be performed according to Rule 352 §302.2.
   a) Scheduling and notification of an initial test or annual retest shall be done in accordance with Rule 352 Sections 401.1 and 401.3.

b) A tester shall record the results of a Pressure Test according to the format in Rule 352 §501.2.

c) A valid MCESD decal shall be affixed to the vessel consequent to passing the MC Pressure Test before the vessel may deliver or onload gasoline.

d) An owner or operator of a delivery vessel shall comply with Rule 352 §401.2 registration requirements to obtain a valid MCESD decal after a successful MC Pressure Test.

[County Rule 352 §302.1] [locally enforceable only]

7) A vessel that is being MC Pressure Tested shall pass all 3 of the following pressure subtests, in the following order, and use the same vapor hose during the test as will be used for deliveries by that same unit:

Lose no more than 1.0 inch (25.4 mm) of water column in 5.0 minutes, when pressurized to a gauge pressure of 18 inches (45.7 cm) of water in 2 consecutive runs according to procedures in subsections 5.1.1 through 5.2.7 of EPA Method 27, as incorporated by reference in §504 of Rule 352; and

b) Lose no more than 5.0 inches (127 mm) of water column in 5.0 minutes, measured in the vapor system after the vessel compartments are first collectively pressurized to a gauge pressure of 18 inches (45.7 cm) of water and then the vapor valves are closed, per §503.2 of Rule 352; and

c) Gain no more than 1.0 inch (25.4 mm) of water column in 5.0 minutes, when initially evacuated to a gauge pressure of 6 inches (15.2 cm) of water, in 2 consecutive runs, per subsections 5.3.1 through 5.3.7 of EPA Method 27, as incorporated by reference in §504 of Rule 352.

d) A subtest is invalidated if during either of the pressure subtests, more than 1/2 inch water pressure is gained, or if during the vacuum test the vacuum is increased by more than minus ½ inch.

[County Rule 352 §301.2.2] [locally enforceable only]

8) A vessel shall be repaired, retested, and pass all 3 subtests in the same testing period within 15 days of testing if it does not pass all 3 subtests of §302.2 of Rule 352.

[County Rule 352 §302] [locally enforceable only]

9) Each gasoline delivery vessel shall clearly display a valid MCESD air quality decal that is permanently mounted near the front on the right (passenger) side of the vessel.

[County Rule 352 §303] [locally enforceable only]

10) Purging Prohibited:

a) The Permittee shall not purge gasoline vapors into the atmosphere from a delivery vessel unless the following conditions are met:

(1) VOC emissions shall be reduced at least 90% by weight, including capture and processing, by a control device having a Maricopa County Air Pollution Permit; and

(2) Such purging shall be done only after all delivery valves are opened and any liquid gasoline outflow is captured in a container having an attached lid which is kept closed when not receiving or pouring gasoline.

b) An operator of a delivery vessel shall not purge gasoline vapors from such vessel as a passive result of switch loading, except for vessels exempted by Rule 352 §305.1.

[County Rule 352 §304] [locally enforceable only]

11) Opening Hatches on Nonexempt Vehicles:
   a) Owners/operators, their contractors, and authorized government agents may open vapor containment equipment on a nonexempt gasoline delivery vessel while performing operations required by governmental agencies, but shall be restricted as follows, unless approved in advance by the Control Officer:
      (1) Wait at least 3 minutes after onloading is complete and after a delivery vessel has stopped before opening its hatch or other vapor seal;
      (2) Reclose hatch or other sealing device within 3 minutes of completing the required procedures; and
      (3) Limit windspeed at opened hatch or other opened sealing device to not more than 3 mph (1.34 m/sec), using a barrier if necessary.
   b) Hatches of a delivery vessel may be open for monitoring to prevent overflow during the period that the vessel is receiving gasoline from a tank or other source, if so required by a local fire code or other ordinance.
   c) Connecting Coaxial Fittings: Requirements for first connecting a vapor hose before a gasoline delivery hose do not apply to coaxial VR connection fittings.

[County Rule 352 §305.3] [locally enforceable only]

12) Purging Prohibited:
The Permittee shall not purge gasoline vapors into the atmosphere from a delivery vessel except to prepare for a pressure test, and then only if the following conditions are met.
   a) Purging is done in accordance with EPA Method 27
   b) Purging is done only after all delivery valves are opened and any VOC-liquid flow is captured in a container which is kept closed when not in use.

[SIP Rule 352 §303]

13) Vapor Recovery Required:
The Permittee shall not store or transport gasoline in or otherwise use or operate any delivery vessel unless such vessel is designated and maintained to be vapor tight and leak free.

[SIP Rule 352 §301]

14) Gasoline Delivery Vessel Leak Test Required:
The Permittee shall not allow a gasoline delivery vessel subject to this rule to be loaded with or contain gasoline unless the gasoline delivery vessel:
   a) Is tested annually to verify compliance with SIP Rule 352 §302.2

[SIP Rule 352 §302.1]

   b) Is tested according to the procedures in SIP Rule 352 §503.1 & 503.2 and sustains pressure for no more than;
      (1) One inch (25.4 mm) of water in five minutes, when pressurized to a gauge pressure of 18 inches (45.7 cm) of water in two consecutive runs; and

(2) One inch (25.4 mm) of water in five minutes, when evacuated to a gauge pressure of six inches (15.2 cm) of water in two consecutive runs; and

(3) Five inches (127 mm) of water in five minutes measured in the vapor system after the vessel-compartments are first collectively pressurized to a gauge pressure if 18 inches (45.7 cm) of water and then the vapor valves are closed.

[SIP Rule 352 §302.2]

c) Is repaired and retested within 15 days of testing if it does not meet all standards of [29. B. 14. b)] above.

[SIP Rule 352 §302.3]

d) Displays a valid decal, issued pursuant to SIP Rule 352 §401.2, near the Department of Transportation Certification Plate required by 49 CFR 178.340-10b.

[SIP Rule 352 §302.4]

C. Monitoring and Recordkeeping Requirements

1) The Permittee shall maintain records of all certification, testing, and repairs where such records must be maintained in a legible, readily available condition for at least 5 years after the date the testing and repair is completed. The records of the certification testing required by Rule 352 §302 must be recorded in both of the following documents: the "Application for Air Pollution Vapor Recovery Certification" and the "Tank Truck Leak Certification Check List". Pressure and vacuum shall be recorded to no less than the nearest quarter inch or half-centimeter of water column. The minimum requirements for each of these 2 documents follow:

a) For the "Application for Air Pollution Vapor Recovery Certification":

(1) Permittee's name and address;

(2) Tank ID number, the location of the test, the time of the test, and the date of the test;

(3) For the pressure subtest, 2 readings: the change in pressure (in inches H_2O) for Run 1 and the change in pressure for Run 2;

(4) For the vapor-valve subtest (§302.2b), 1 reading: the total change in pressure during the test; and

(5) For the vacuum test, 2 readings: the total change in vacuum during Run 1 and the same for Run 2.

b) The "Tank Truck Leak Certification Check List" (or its successor document) shall contain at least the following information:

(1) Permittee's name and address;

(2) Tank ID number, the location of the test, the time of the test, and the date of the test;

(3) The time the subtest began, the initial pressure of the subtest, the finish time, the final pressure of the subtest, and the pressure change between the start and end of the subtest; the vessel's unit number, manufacturer's serial number, the tank capacity, whether the tank was purged of gasoline vapors, and the date of the next leakage test if the set of 3 subtests are not all passed.

(4) If the initial pressure test was not passed, one set of readings in the row "Initial Test", also giving the elapsed time if the pressure reached zero before

5 minutes. For example, the row marked "Initial Test" will normally contain the results of the initial failed subtest if any repairs were made subsequent to any pressurization or evacuation of the tank.

[County Rule 352 §501]

2) The Control Officer may at any time monitor a delivery vessel, including the vapor collection system, for vapor and liquid leaks to ascertain if it is vapor tight and leak free. Leakage of vapor exceeding 1/5 of the lower explosive limit, or 10,000 ppm as methane, when performed according to Rule 352 §504.4, shall be an exceedance of the vapor-tight standard of Rule 352 §301.1.

[County Rule 352 §502][SIP Rule 352 §502]

3) When more than one test method is permitted for a determination, an exceedance of the limits established in the rule determined by any of the applicable test methods constitutes a violation of Rule 352.
   a) Pressure And Vacuum Tests: The subtests to determine compliance with Rule 352 §§302.2a & 302.2c shall be performed according to EPA Method 27, except that the definition of gasoline shall be according to Rule 352.
   b) Test Of Internal Vapor Valves: The test to determine compliance with Rule 352 §302.2b shall be performed immediately after successfully passing the pressure subtest (pursuant to §302.2a), without performing any intervening maintenance or repair on the vapor valves.
   c) Confirmation of a vapor leak detected on a vessel during onloading shall be determined by properly deploying a pressure tap adapter that conforms to Method 27 provisions, and demonstrating the leak according to the following tightness test method (Rule 352 §504.4), while the pressure is less than 20 inches of water column:
      (1) Calibration:
      Within 4 hours prior to monitoring, the combustible gas detector or organic vapor analyzer shall be suitably calibrated for a 20 percent LEL response, or to 10,000 ppm with methane.
      (2) Probe Distance:
      The probe inlet shall be 1 inch (2.5 cm) or less from the potential leak source when searching for leaks. The probe inlet shall be 1 inch (2.5 cm) from the leak source when the highest detector reading is being determined for a discovered leak. When the probe is obstructed from moving within 1 inch (2.5 cm) of an actual or potential leak source, the closest practicable probe distance shall be used.
      (3) Probe Movement:
      The probe shall be moved slowly, not faster than 1.6 inches per second (4 centimeters per second). If there is any meter deflection at a potential or actual leak source, the probe shall be positioned to locate the point of highest meter response.
      (4) Probe Position:
      The probe inlet shall be positioned in the path of the vapor flow from a leak such that the central axis of the probe-tube inlet shall be positioned coaxially with the path of the most concentrated vapors.
      (5) Data Recording:

The highest detector reading and location for each incidence of detected leakage shall be recorded, along with the date and time. If no gasoline vapor is detected, that fact shall be entered into the record.

[County Rule 352 §503] [SIP Rule 352 §503]

d) Pursuant to Rule 352 §203, Reid vapor pressure shall be determined using American Society for Testing and Materials (ASTM) Method D 323-90.

[County Rule 352 §503.4][SIP Rule 353 §504.3]

D. Testing Requirements:
Tests required by the SIP Rules 352 §302.2a,b, and c, shall be conducted by the owner or operator of the delivery vessel, or by a consultant, at the expense of the owner or operator:

Notification: Prior to testing, the Permittee or tester shall notify the Control Officer of the date, time and location of the testing and the Control Officer may at any time observe the tests.

[SIP Rule 352 §401.1]

30. WOODWORKING ACTIVITIES:

A. Affected Sources
Woodworking and modeling Operations in Buildings 247, 339, and 415.

B. Allowable Emissions Limitations

1) The Permittee shall not discharge into the ambient air from any single source of emissions any air contaminant, other than uncombined water, in excess of 20 percent opacity, except as provided in County Rule 300 §302.

[County Rule 300 §301] [Locally enforceable only]

2) Except as otherwise provided in Regulation I, Rule 4, Exceptions, the opacity of any plume or effluent from any source of emissions, other than uncombined water, shall not be greater than 40 percent opacity as determined by Reference Method 9 in the Arizona Testing Manual.

[SIP Rule 30 A]

C. Operational Limitations and Standards
The Permittee is required to vent all workshop exhaust into a Department approved particulate matter emission control system, (cyclone), without bypass.

[County Rule 210 §302.1]

D. Monitoring and Recordkeeping Requirements

1) The Permittee shall conduct a weekly facility walk-through and observe visible emissions from any source capable of emitting any air contaminant, other than uncombined water, to the ambient air. The Permittee shall log the visual observations, including the date and approximate time when that reading, location of visible emissions or a statement that no visible emissions were observed, name of the person who took the observation and any other related information.

[County Rule 300] [County Rule 210 §302.1c(1)] [SIP Rule 30]

2) The Permittee shall log the following information for all visible emissions observations and Method 9 opacity readings required by this permit:
   a) The date and time the visible emissions observation or Method 9 opacity reading was taken;
   b) The name of the observer;
   c) Whether or not visible emissions were present;
   d) If visible emissions are present and the controls and facility processes are operating in a mode other than their normal operating conditions, such as startup or shutdown, a description of the operating conditions at the time that the opacity is observed;
   e) The opacity determined by a Method 9 opacity reading, if a Method 9 reading is required by these permit conditions;
   f) If applicable, a description of any corrective action(s) taken, including the date of such action(s); and
   g) Any other related information.

   [County Rule 300] [County Rule 210 §302.1]

3) If visible emissions, other than uncombined water, are observed being discharged into the ambient air, the Permittee shall monitor for compliance with the opacity standards specified in this permit by having a certified visible emissions evaluator determine the opacity of the visible emissions being discharged into the ambient air using the techniques specified in EPA Reference Method 9.

   If the Permittee has not received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of visible emissions, the initial Method 9 opacity reading shall be taken within three days of observing visible emissions. If the Permittee has received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of emissions, the initial Method 9 opacity reading shall be taken within one day of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next day that the emitting equipment is in operation. If the problem causing the visible emissions is corrected before the initial Method 9 opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity readings.

   Follow-up Method 9 opacity readings shall be performed by a certified visible emissions evaluator while the emitting equipment in its standard mode of operation in accordance with the following schedule:

   Daily:
   a) Except as provided in paragraph 4) of this Permit Condition, a Method 9 opacity reading shall be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 readings have occurred.

b) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly.

Weekly:

a) If the permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the equipment is operated.
b) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with paragraph 1 of this Permit Condition.
c) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of paragraph 3 of this Permit Condition are met.

[County Rule 210 §302.1c]

4) Cease Follow-up Method 9 Opacity Monitoring:
Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure.

[County Rule 210 §302.1c]

5) Opacity Readings
a) Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.

[40 CFR 60.11.b] [County Rule 300 §501]

b) Opacity of visible emissions from intermittent sources as defined by County Rule 300 §201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 25 consecutive readings shall be required at 15-second intervals for the averaging time.

[County Rule 300 §502][Locally enforceable only]

6) The Permittee must monitor the cyclones as specified in the most recently Department approved O&M Plan that are attached in Appendix E.

[County Rule 210 §302.1 (c)]

E) Reporting
The Permittee shall include the following in each semi-annual Compliance Report:

1) The dates of any week that the required visible emissions observations were not taken, an explanation for the deviation from the monitoring requirement, and a description of any action taken to ensure that future observations are performed, if applicable;
2) The source and location from which visible emissions were observed;
3) Any date which visible emissions were observed;
4) The approximate time of the observation;
5) The name of the observer;

6) A description of any corrective actions taken, if any, to reduce the visible emissions; and

7) If a follow-up Method 9 reading was required, the opacity of the emissions determined by Method 9, a copy of the visual determination of opacity record showing all information required by the Method and any other related information.

[County Rule 210 §302.1e]

31. SOLVENT AND MATERIAL USAGE:

A. Affected Sources

Sources located basewide.

B. Allowable Emissions Limitations

Except for any emission involving heat, The Permittee shall not discharge more than 40 pounds (18 kg) of volatile organic compounds into the atmosphere in any one day from any machine, equipment, device or other article for employing, applying, evaporating or drying any non-complying solvent (as defined in County Rule 330 §202) or material containing such non-complying solvent, unless:

1) For the SVE unit at building 353, the VOC emissions are vented to the internal combustion engine, (ICE), and ICE is operated with the requirements of the permit and the Department approved O&M Plan; or

2) For the paint booth located in building 922, the VOC emissions are vented through the fabric filter and activated carbon panels and these controls are operated with the requirements of the permit and the Department approved O&M Plans; or

3) For all other sources, the entire amount of such discharge has been reduced by using low VOC material containing no more than 20 percent VOC by volume (as determined by the applicable test method(s) and excluding non-precursor organic compounds and water), provided that no VOC from the material comes into contact with flame or;

[County Rule 330 §§302 &304] [SIP Rule 34]

C. Operational Limitations and Standards

1) Gaseous and Odorous Emissions

The Permittee shall not emit gaseous or odorous air contaminants from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution.

[County Rule 320 §300] [SIP Rule 32A]

2) Material Containment Required

Materials including, but not limited to, solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizer and manure shall be processed, stored, used and transported in such a manner and by such means that they will not unreasonably evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices or equipment shall be mandatory.

[County Rule 320 §302] [SIP Rule 32C]

3) Stack Requirements
Where a stack, vent or other outlet is at such a level that air contaminants are discharged to adjoining property, the County may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet to a degree that will adequately dilute, reduce or eliminate the discharge of air contaminants to adjoining property.

[County Rule 320 §303] [Locally enforceable only]

4) Process Lines
Emissions of VOCs from any series of machines, equipment, devices or other articles which are designed for processing any item including but not limited to continuous web(s), strip(s), or wire(s) and which use operations described in Sections 301 and/or 302 of County Rule 330 shall be collectively subject to the limitations of and compliance with those sections.

[County Rule 330 §303]

5) Equipment Clean Up
The Permittee shall not use any liquid materials containing more than 10 percent volatile organic compounds for the cleanup of equipment unless the used cleaning liquids are collected in a container that is closed when not in use and is disposed of in a manner such that volatile organic compounds are not emitted into the atmosphere. Alternatively, the equipment may be disassembled and cleaned in a solvent vat that is closed when not in use, or cleaned by other methods, if approved in writing by the County, which limit evaporation.

[County Rule 330 §305]

6) VOC Containment and Disposal
a) The Permittee shall not store, discard, or dispose of VOC or VOC-containing material in a way intended to cause or to allow the evaporation of VOC to the atmosphere. Reasonable measures shall be taken to prevent such evaporation that includes, but are not limited to, the following:
(1) All materials from which VOC can evaporate, including fresh solvent, waste solvent and solvent-soaked rags and residues, shall be stored in closed containers when not in use;
(2) Such containers one gallon and larger shall be legibly labeled with their contents; and
(3) Records of the disposal/recovery of such materials shall be kept. Records of hazardous waste disposal shall be kept in accordance with hazardous waste disposal statutes.
b) All materials from which VOC can evaporate, including fresh solvent, waste solvent and solvent-soaked rags and residues, shall be stored in closed containers when not in use. Such containers one gallon and larger shall be legibly labeled with their contents.

[County Rule 330 §306]

D. Exemptions
The provisions of Rule 330 shall not apply to the use of equipment, materials, and/or substances that meet applicable requirements and standards specified by other County Air

Quality rules. The provisions also do not apply to the spraying or other employment of insecticides, pesticides or herbicides.

[County Rule 330 §307]

E. Monitoring and Recordkeeping

1) The Permittee shall maintain a log of complaints of odors detected off-site. The log shall contain a description of the complaint, date and time that the complaint was received, and if given, name and/or phone number of the complainant. The logbook shall describe what actions were performed to investigate the complaint, the results of the investigation, and any corrective actions that were taken.

[County Rule 210 §302.1c(2)] [Locally enforceable only]

2) If The Permittee uses an emissions control device to reduce emissions in accordance with this section of the permit, they shall provide the County with an Operation and Maintenance (O&M) Plan. This plan shall specify key system operating parameters, such as temperatures, pressures and/or flow rates, necessary to determine compliance with this rule and describe in detail procedures to maintain the approved emission control system. The County's written approval of this plan shall be required for compliance with this rule to be achieved.

[County Rule 330 §§302 & 304]

3) The Permittee shall provide, properly install and maintain devices specified in its Operation and Maintenance Plan for indicating temperatures, pressures, rates of flow, or other operating conditions necessary to determine if air pollution control equipment is functioning properly and is properly maintained.

[County Rule 330 §501]

4) Records of the disposal/recovery of VOC containing waste materials shall be kept. Records of hazardous waste disposal shall be kept in accordance with hazardous waste disposal statutes.

[County Rule 330 §306]

5) Current List

Maintain a current list of coatings, adhesives, makeup solvents, and any other VOC-containing materials; state the VOC content of each in pounds per gallon or grams per liter. VOC content shall be expressed less water and non-precursor compounds for materials that are not used for cleaning or cleanup.

[County Rule 330 §503.1]

6) Monthly Usage Records

Maintain monthly records of the amount of each coating; adhesive; makeup solvent; solvent used for surface preparation, for cleanup, and for the removal of materials; and any other VOC-containing material used. Identify any materials subject to the emission limits described above and keep separate totals for these materials.

[County Rule 330 §503.2]

7) Operation and Maintenance
As indicated above, maintain a continuous record of the times an approved emission control device is used to comply with this rule. Maintain daily records of the O&M Plan's key system operating parameters. Account for any periods of operation when the control device was not operating. Maintain records of all maintenance performed according to the O&M Plan.

[County Rule 330 §503.3]

8) Discarded Materials
Maintain records of the type, amount, and method of disposing of VOC-containing materials on each day of disposal.

[County Rule 330 §503.4]

9) Records required by these permit conditions shall be retained for five years and shall be made available to the County upon request.

[County Rule 200 §309.1]

F. Reporting
The Permittee shall include a copy of the portion of the odor log, which covers the applicable 6-month reporting period in each of the semiannual compliance reports. If no complaints were received during the reporting period, a statement to that effect may be substituted for the copy of the odor log.

[County Rule 210 §302.1e(1)] [Locally enforceable only]

32. SURFACE COATING ACTIVITIES:

A. Affected Sources
Surface coating operations at Buildings 247, 339, and 415.

B. Operational Limitations and Standards

1) The Permittee shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:
   a) Should the Permittee operate spray coating equipment outside of a building, The Permittee shall operate all spray coating equipment inside an enclosure which has at least three sides a minimum of eight feet in height and able to contain any object(s) being coated.
   b) For three-sided enclosures, the Permittee shall direct the spray in a horizontal or downward pointing manner so that overspray is directed at the walls or floor of the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of the top of the enclosure.
   c) For enclosures with three sides and a roof, or for complete enclosures, the Permittee shall direct the spray into the enclosure so that the overspray is directed away from any opening in the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of any open top of the enclosure.

[County Rule 315 §301.1] [SIP Rule 34]

2) The Permittee shall operate a filtering system on any spray booth or enclosure with forced air exhaust. The filtering system shall have an average overspray removal

efficiency of at least 92% by weight, as specified in writing by the manufacturer, for the type of material being sprayed. No gaps, sags or holes shall be present in the filters and all exhaust must be discharged into the atmosphere.

[County Rule 315 §301.2]

3) The Permittee shall be exempt from Paragraph B.1 above if the spray coating operation is one of the following:
   a) Spray coating of buildings or dwellings, including appurtenances and any other ornamental objects that are not normally removed prior to coating;
   b) Spray coating of facility equipment or structures that are fixed in a permanent location and cannot easily be moved into an enclosure or spray booth and which are not normally dismantled or moved prior to coating;
   c) Spray coating of objects which cannot fit inside of an enclosure with internal dimensions of 10 feet wide by 25 feet long by 8 feet high;
   d) Enclosures and spray booths and exhausts located entirely in a completely enclosed building, providing that any vents or openings do not allow overspray to be emitted into the outside air; or
   e) Coating operations utilizing only hand-held aerosol cans.

   [County Rule 315 §302]

4) The Permittee shall comply with the emission limits specified in Table 32-1 for all applications of surface coatings that do not qualify for one of the exemptions listed in section 5):

   [County Rule 336 §301] [SIP Rule 336 §301]

5) Exemptions
   This section of the permit does not apply to the following operations at LAFB:
   a) Aerospace coating operations (County Rule 348);
   b) Architectural coating, including buildings and erected structures (County Rule 335);
   c) VOC loss from cleaning or stripping a surface for coating or other purpose is regulated by County Rule 331;
   d) Polyester coatings applied to polyester composites;
   e) Coating a highway vehicle or mobile equipment (County Rule 345);
   f) Coating Wood Furniture (County Rule 342);
   g) Coating Wood Millwork (County Rule 346);
   h) Extreme performance coatings are exempt from the VOC limits of Table 32-1, herein, when used under the following conditions:
      (1) Used on internal combustion engine components that are normally above 250°F (121°C) during use; or
      (2) Used at temperatures above 250°F (121°C) on items that are both included under SIC (Standard Industrial Classification, 1987) codes 3661, 3663, 3669, 3677, 3678, 3679, or 3769 and are electronic products in space vehicles and/or are communications equipment. The US Government Printing Office "Standard Industrial Classification Manual, 1987" (and no future editions) is incorporated by reference and is on file

at Maricopa County Environmental Services Department, 1001 N. Central Avenue, Suite 201, Phoenix, Arizona 85004-1942;

j) Coatings applied from an aerosol can;

k) Touch up or repair-coating operations as defined in §§250 & 240 of County Rule 336; and

l) Tactical military-equipment coating that is approved in an MCESD Air Pollution Permit subsequent to a sufficient demonstration by the user that no compliant substitute exists.

[County Rule 336 §305] [SIP Rule 336 §305]

6) Application Methods for Surface Coatings:
The Permittee shall employ one of the following for all applications of surface coatings containing more than two pounds of VOC per gallon (240 g/L) minus exempt compounds:

(a) A low pressure spray gun; or

(b) A system that atomizes principally by hydraulic pressure, including "airless" and "air assisted airless", or

(c) Non atomizing or non-spraying application methods, such as but not limited to dipping, rolling, or brushing;

[County Rule 336 §302] [SIP Rule 336 §302]

7) Cleanup of Application Equipment:
The Permittee shall comply with the following when using VOC containing material to clean application equipment:

(a) Disassemble any spray gun and other applicable equipment and clean it in:

(1) A container which remains covered at all times, except when the application equipment is being handled in the container, or transferred into or out of the container; or

(2) A commercially sold gun cleaning machine which shall be operated and maintained according to manufacturers instructions.

(b) Vapor Pressure Limits: The Permittee shall only use solvent which, as used, has a vapor pressure below 35 mm Hg at 20° C (68° F), except spray-less equipment exempted by County and SIP Rule 336 §305.6.

[County Rule 336 §303] [SIP Rule 336 §303]

C. Monitoring and Recordkeeping Requirements
The following records shall be retained for 5 years and shall be made available to the County upon request:

1) The Permittee shall inspect each filter installed on a spray booth or enclosure, for gaps, sags or holes prior to each use. Should the Permittee observe any gaps, sags or holes in any of the filters, it shall immediately repair or replace the filter and record the name of the inspector, the location of filtering system containing the filter, and the time and date that the filter was replaced. If no gaps, sags or holes are observed in any of the filters, the Permittee shall record the name of the inspector, the location of the filtering system containing the filter, a statement that no gaps, sags or holes were observed, and the time and date that the filter was inspected.

[County Rule 210 §302]

2) The Permittee shall inspect the facility for evidence of any spraying activity that occurred outside of the spray booth once per week. The Permittee shall record the name of the inspector, the location of the inspection, a statement summarizing the results of the inspection, the time and date that the inspection was performed and any corrective action taken

[County Rule 210 §302]

2) Before each use, the Permittee shall inspect and record the pressure differential readings from each spraybooth. The most recently approved O&M Plan requires differential pressure for each of the spraybooths to be less than 0.5 millimeters of water. The Permittee shall log all pressure differential readings, including the date when the reading was taken, name or initials of the person who took the reading, and any other related information. The Permittee shall investigate the cause of any reading greater than or equal to 0.5 millimeters of water immediately to identify, correct or repair the problem and record in a log book the cause of the problem and the corrective action initiated to remedy the abnormal pressure differential reading.

[County Rule 210 §302]

3) Maintain a current list of coatings, adhesives, reducers, thinners, gun-cleaning materials, additives, and any other VOC-containing materials regulated by this rule. Give the VOC content of material for each as received (before thinning). A complete, neat assemblage of this data meets the requirements for a list. Express VOC content in 1 of 3 forms: pounds VOC per gallon, grams VOC per liter, or the percent VOC by weight along with the specific gravity or density, (2 numbers are required).

[County Rule 336 §501.1] [SIP Rule 336 §501.1]

a) For purposes of recording usage, coatings and adhesives that are in the same category in Table 32-1, herein, and have similar VOC content, may be recorded under a name that includes the category name. The highest VOC content among the members of that grouping shall be assigned to that grouping, rounded to the nearest 10th of a pound. To identify what products belong within each group, after each group name and the group's VOC content of material must appear the name of each product in the group and its VOC content of material. For example: For flexible plastic parts, you use 20 gallons of primer that has 3.04 lb VOC/gal., 30 gallons of primer having 3.14 lb VOC/gal., and 40 gallons of primer having 2.89 lb VOC/gal. You may record usage as 90 gallons of flexible plastic primer containing 3.1 lb VOC/gal. If grams VOC per liter is used to record VOC content, round off to the nearest whole number of grams.

[County Rule 336 §501] [SIP Rule 336 §501]

b) The Permittee shall record the following:

(1) Coatings:

For all coatings make the following listings for coatings and adhesives that have VOC limits in Table 32-1, herein:

(a) VOC before Reducing:

The VOC content of each coating as received, minus exempt compounds (this figure is sometimes called the "EPA Method 24" VOC content on manufacturer's data sheets). If the coating is a multi-part coating, list the VOC content which the manufacturer states the coating will have once you have mixed all the necessary parts together in the proportions specified by the manufacturer.

[County Rule 336 §501.1c(1)(a)] [SIP Rule 336 §501.1c(1)(a)]

(b) List Maximum VOC Content of Coating as Applied:
For each coating that you thin/reduce or add any additive to, record in a permanent log either of the following:

i. The maximum number of fluid ounces thinner/reducer that you ever add to a gallon of unreduced coating (or maximum g/liter), and the maximum fluid ounces of every other additive you mix into a gallon of the coating; or

ii. The VOC content of the coating, after adding the maximum amount of thinner/reducer and other additives that you would ever add, as determined by the formula in County Rule 336 §255.1.

[County Rule 336 §501.1c(1)(b)] [SIP Rule 336 §501.1c(1)(b)]

(2) Applicator Cleanup Solvent:
Have a hardcopy of the VOC vapor pressure (VP) at 20°C (68°F) of solvent(s) used to clean spray guns, hoses, reservoirs, and any other coating application equipment. Any one of the following ways of providing the VP data is sufficient:

(a) A current manufacturer's technical data sheet;
(b) A current manufacturer's safety data sheet (MSDS);
(c) Actual test results; or
(d) A letter signed by an official or lab manager of the supplying facility.

[County Rule 336 §501.1c(2)] [SIP Rule 336 §501.1c(2)]

e) A permanent log shall be maintained on site and shall be made available upon request of the Control Officer. The logbook shall contain the following information:

(1) The date and time of each inspection
(2) The name or initials of the person who performed the inspection
(3) Whether or not any gaps, sags or holes were found on the filter
(4) The differential pressure reading of the spray booth if the magnahelic gauge on each spray booth
(5) Whether or not there was any observed spraying activity that occurred outside of the spray
(6) A summary of any corrective action taken

[County Rule 210 §302.1]

3) Frequency of Updating Usage Records
The Permittee shall update its records, showing the type and amount used of each VOC-containing coating or adhesive which is regulated by name or type in Table 1, County Rule 336, and update each VOC-containing material, related to surface coating,

that is not addressed by Table 32-1, herein. This includes, but is not limited to, thinners, surfacers, and diluents. Maintain records according to the following schedule:

a) Monthly:
Monthly update records of each coating used that complies with the VOC limits in Table 32-1. Complete a month's update by the end of the following month.

b) Daily:
Daily update the usage of each coating that exceeds its limits in Table 32-1.

[County Rule 336 §501.2] [SIP Rule 336 §501.2]

D. Reporting Requirements

For the purposes of the semi-annual compliance certification, the Permittee shall provide the following information:

1) If the Permittee operates all spray coating equipment outside of a building and inside an enclosure without fixed air exhaust, the Permittee shall provide a statement certifying the following:
   a) That the enclosure has at least three sides that are a minimum of eight feet in height;
   b) That no spraying was conducted within three feet of any open end, or within two feet of any open top of the enclosure; and
   c) That the spray is directed in a horizontal or downward pointing manner for three-sided enclosures, or away from any opening for complete enclosures and three-sided enclosures with roofs.

[County Rule 315 §301.1] [SIP Rule 34]

2) If the Permittee operates all spray coating equipment with a filtering system on a spray booth or enclosure with forced air exhaust, the Permittee shall provide a statement certifying the following:
   a) That each filter installed on a spray booth or enclosure was inspected for gaps, sags or holes prior to each use;
   b) That all filters that were observed to have gaps, sags or holes were immediately replaced; and
   c) Details of the make and manufacturer of each filter used as well as its overspray control efficiency.

[County Rule 315 §301.2]

The Permittee shall provide a statement certifying that no spraying occurred outside of the paint booths. If evidence of spraying outside of the booth was found the Permittee shall instead submit a statement detailing any corrective action taken in order to ensure that future spraying occurs inside the spray booth.

[County Rul**TABLE 32-1**

SURFACE COATING EMISSION LIMITS	
TYPE OF SURFACE COATING	LIMITS AS APPLIED: VOC content minus exempt compounds (see Rule 336 §255.1)

Column I	**Column II** lbs/gal	g/liter
Can Coating		
Sheet Basecoat (Exterior and Interior) and Overvarnish	2.8	340
Two-Piece Can Exterior (Basecoat and Overvarnish)	2.8	340
Two and Three-Piece Can Interior Body Spray	4.2	510
Two-Piece Can Exterior End (Spray or Roll Coat)	4.2	510
Three-Piece Can Side-Seam Spray	5.5	660
End Sealing Compound	3.7	440
Can Printing Ink	2.5	300
Coil Coating (any coat)	2.6	310
Metal Furniture Coating	3.0	360
Large Appliance Coating	2.8	340
OTHER METAL PARTS AND PRODUCTS COATING (As defined in Rule 336 §231.)		
The following includes Non-adhesive Coating, Adhesive, Adhesive Primer, Caulking, and Beaded Sealants:		
Air-Dried Coating	3.5	420
Baked Coating [above 200°F (93°C)]	3.0	360
Silicone Release Coating: Baked or Air-Dried	3.5	420
Fabric Coating	2.9	350
Film Coating	2.9	350
COATING PLASTIC PARTS AND PRODUCTS THAT ARE **Not** Defined as Flexible	3.5	420
COATING FLEXIBLE PLASTIC PARTS AND PRODUCTS		
Primer	4.1	490
Color Topcoat	3.8	450
Basecoat/Clear Coat (Combined System) – Limit for either coat	4.5	540
Paper Coating, including Adhesives	2.9	350
Vinyl Coating (Coating on Vinyl)	3.8	450
STRIPPABLE BOOTH COATINGS	2.0	240

33. VEHICLE REFINISHING:

A. Affected Sources

Vehicle refinishing operations in Buildings 235, 291, and 1390.

B. Allowable Emissions Limitations

1) The Permittee shall not apply a coating on a previously finished automobile/light-duty vehicle in Maricopa County unless the coating's VOC content complies with the applicable limits in Table 33-1, herein. Vehicle-body appurtenances such as mirrors, trim strips, license-plate frames, etc., used to replace or supplement existing appurtenances on an automobile/light-duty vehicle bodies may be coated with coatings that meet the applicable VOC limits in Table 33-1, even if the item has never been coated or used.

The recoating of a section of a light-duty vehicle that is not part of its body/chassis, its body's appurtenances, nor its wheels, shall comply with the VOC limits of Table 33-3, herein. This includes drive-train, steering gear, suspension, etc.

[County Rule 345 §301][Locally enforceable only]

2) The Permittee shall not apply refinish coating to any section or appurtenance of the body or chassis of a heavy truck unless that coating complies with the VOC limits in Table 33-1.

At the time of (re)placement, the Permittee may coat heavy truck body appurtenances such as mirrors, trim strips, license-plate frames, wheel covers, etc., with coatings that meet the applicable VOC limits in Table 33-2, herein, or the requirements of item a below, if the item is about to be used to replace or supplement existing appurtenances, even if the item has never previously been coated or used.

The Permittee may coat a heavy truck panel, a juncture of panels, or a body appurtenance using a coating with a VOC content that does not exceed 546 g VOC/L (4.55 lb VOC/gal), provided that the coatings as applied meet the following requirements:

a) The coating shall be applied from a reservoir having a gross volume not exceeding 1.2 liters (5 cups) and containing no more than 1 liter (1.1 qt.) of coating.
b) The complete topcoat of a single stage finish shall not use more than 1 liter.
c) The complete topcoat of a multi-stage finish shall not exceed 2 liters.
d) The total of all non-topcoat coatings, including wash and primers shall not exceed 1 liter.

Wash Primers may have up to 780 g/L (6.5 lb/gal).

[County Rule 345 §302] [Locally enforceable only]

C. Operational Limitations and Standards

1) The Permittee shall install and operate a filtering system on any spray booth or enclosure with forced air exhaust. The filtering system shall have an average overspray removal efficiency of at least 92% by weight, as specified in writing by the manufacturer, for the type of material being sprayed. No gaps, sags or holes shall be present in the filters and all exhaust must be discharged into the atmosphere.

[County Rule 315 §301.2] [Locally enforceable only]

2) The recoating of a section of mobile equipment or a heavy-duty vehicle, including a heavy truck, that is not part of its body/chassis, its wheels, nor appurtenances, shall comply with the VOC limits of County Rule 345, Table 1. This includes drive-train, steering gear, suspension, etc.

The Permittee shall not refinish mobile equipment or any heavy-duty vehicle that is not a heavy truck unless the coating as applied conforms to the VOC limits in County Rule 345, Table 3, except that pre-treatment acid etchant wash shall conform to the VOC limits of row 1 in Table 33-2, herein.

[County Rule 345 §303] [Locally enforceable only]

3) The Permittee, in adding VOC-containing thinner, reducer, or other diluent to any refinish coating regulated by either Table 33-1 or Table 33-2 shall not add such diluents

in proportions higher than those specified or recommended by the instructions provided by the supplier of the coating.

[County Rule 345 §304] [Locally enforceable only]

4) When the Permittee is cleaning or preparing a surface of a vehicle or mobile equipment for coating using a wipe method or other non-dip method, it shall use a material with a VOC content as applied of no more than 1.4 pounds of VOC per gallon as determined by methods set forth in County Rule 345 §502.1d or 502.3. Neither surface-cleaning nor surface-preparation material that contains VOC shall be applied by means of motor-compressed air if applied in a mist or (finely atomized) spray. County Rule 331 will control dip cleaning of vehicle or mobile equipment surfaces.

[County Rule 345 §305] [Locally enforceable only]

5) The Permittee shall operate and maintain in proper working order all production and cleaning equipment in which VOC-containing materials are used or stored.

[County Rule 345 §306] [Locally enforceable only]

6) The Permittee shall not apply any coating with a VOC content exceeding 3.0 lb VOC/gal (360 g/l) using a spray gun, unless such spraying employs one of the following devices or systems:
   a) A low pressure spray gun or system (such as HVLP), or
   b) A system that atomizes principally by hydraulic pressure, including “airless” and “air-assisted airless.”

[County Rule 345 §307.1] [Locally enforceable only]

7) The Permittee may use a spray gun other than one conforming to the above requirements if:
   a) Applying materials that have a VOC content not exceeding 3.0 lb VOC/gal (360 g/l) as applied, less water and non-precursor compounds;
   b) Such guns are designed and used solely for detailing and/or touch-up, and have a maximum reservoir capacity of 250 cc (8.8 fluid ounces); or
   c) Such guns are used to apply adhesives.

[County Rule 345 §307] [Locally enforceable only]

8) The Permittee shall provide, properly install and maintain in calibration, in good working order and in operation, the spray booth and overspray filter described in the facilities O&M Plan.

[County Rule 345 §504] [Locally enforceable only]

9) Manual and Automatic Spray Gun Cleaning:
   a) Affected Sources
      Paint Gun Cleaners in Buildings. 235, 291, 1018, and 1019.
   b) Operational Limitations and Standards:
      (1) All solvent used to manually clean spray guns shall be collected into a container which shall be immediately closed after all the solvent has been collected. All solvent used for line cleaning shall be pumped or drained into a container kept closed when not in use. Tanks used for stripping off coating or for cleaning objects shall be covered when not in use. Solvent-

dragout shall be minimized by tilting or rotating the object to drain off any pools of solvent before removing the object from above the tank.

[County Rule 345 §309] [Locally enforceable only]

(2) Manual cleaning outside of the cleaning machine is allowed if the cleaning machine is used immediately after manual cleaning, and if done without spraying cleaning solvent with the gun. A cleaning machine is not required to clean a paint gun if the gun is cleaned with water or a cleaning mixture that is more than 1/2 water by weight or volume.

[County Rule 345 §310] [Locally enforceable only]

10) Storage of Vehicle Refinishing Related VOC and VOC-Containing Material
The Permittee shall store all VOC-containing materials, including but not limited to waste coatings, waste solvents and their residues, and rags in closed containers. A container must have a legible label identifying the container's contents and shall be kept closed except when contents are added or removed. Disposal of waste or surplus VOC-containing materials shall be done in a manner that inhibits VOC evaporation, such as having these materials hauled off site in sealed containers.

[County Rule 345 §311] [Locally enforceable only]

D. Exemptions
Maricopa County Air Pollution Rules and Regulations Rules 330 and 336 do not apply to any vehicle or mobile equipment coating or refinishing operation to which this Rule 345 is applicable.

[County Rule 345 §312] [Locally enforceable only]

E. Monitoring and Recordkeeping Requirements

1) If The Permittee, in a calendar year meets or exceeds any of the following quantities must notify the County of this fact in writing by February 28 (within two months) after the end of that calendar year:
   a) Used a total of 1000 gallons (3785 l) of coating (with reducer and hardener).
   b) Received a total of 1300 gallons (4920 l) of cleaning solvent, lacquer thinner and wash-thinner.
   c) Disposed of more than 1000 gallons or 6000 pounds (2722 kg) to hazardous waste collection.
   d) Submitted a total exceeding 9000 pounds (4082 kg) of VOC in the facility's most recently completed Maricopa County annual air-emission inventory form.

   The County may require in writing a report of annual emissions from a facility which has given notification as required by the preceding paragraph, or from any other facility which in the County's determination can have annually emitted 5 tons (4536 kg) or more of VOC.

   [County Rule 345 §402] [Locally enforceable only]

2) The Permittee shall keep the records described below, [Permit Condition 33.E.3)], in a consistent and complete manner and shall make them available to the County without delay during normal business hours.

[County Rule 345 §501] [Locally enforceable only]

3) The Permittee shall maintain written records in the facility that give the name or code number of each VOC-containing product and its VOC content as received. VOC content shall be expressed in pounds of VOC per gallon (or grams/liter), less water and non-precursors, excepting waterborne cleaners that shall include the water. Any one of the following may be used to meet these requirements as long as all VOC-containing refinishing products are accounted for:
   a) An up-to-date hardcopy (in writing) list prepared for that facility.
   b) Current material safety data sheets (MSDS) or product data sheets showing the VOC content.
   c) Purchase documentation that gives VOC content, such as invoices and/or receipts showing VOC content.
   d) Current, dated manufacturers publications such as charts or lists which show VOC content, with the products used in the facility highlighted or otherwise clearly marked.

   Purchase records showing the volume of each VOC-containing refinishing-related product purchased shall be kept available for the current and the previous year. Actual invoices and receipts showing the volume of the material purchased will suffice in place of ledger-style records. Records required by this section of the permit shall be retained for five years.

   [County Rule 345 §501] [Locally enforceable only]

4) The Permittee shall inspect each filter installed on a spray booth or enclosure, for gaps, sags or holes once per week. Should the Permittee observe any gaps, sags or holes in any of the filters, it shall immediately repair or replace the filter and record the name of the inspector, the location of filtering system containing the filter (if more than one spray booth), and the time and date that the filter was replaced. If no gaps, sags or holes are observed in any of the filters, the Permittee shall record the name of the inspector, the location of the filtering system containing the filter (if more than one spray booth), and the time and date that the filter was inspected. The Permittee shall inspect the facility for evidence of any spraying activity that occurred outside of the spray booth once per week.

   [County Rule 210 §302]

5) The Permittee shall maintain on file and make available to the County upon request, a copy of the manufacturer's specifications verifying that the average overspray removal efficiency for the filter is at least 92%.

   [County Rule 210 §302.1d]

6) On each day that an ECS is used the Permittee shall record the amount and VOC content of the material for which the ECS was used. On each day an ECS is used, make a permanent record of the operating parameters of the key systems as required by the O&M Plan described below. For each day or period in which the O&M Plan requires that maintenance be performed, a permanent record shall be made of the maintenance actions taken within 24 hours of maintenance completion.

   [County Rule 345 §504] [Locally enforceable only]

7) The Permittee shall provide and maintain (an) O&M Plan(s) for the ECS and any ECS monitoring device. The Permittee shall submit to the County for approval the O&M Plans of each ECS and each ECS monitoring device. The Permittee shall comply with all the identified actions and schedules provided in each O&M Plan.

[County Rule 345 §504] [Locally enforceable only]

F. Testing Requirements

The VOC content of gaseous emissions entering and exiting an ECS shall be determined by either EPA Method 18 or EPA Method 25 and its submethod(s), as are incorporated by reference in County Rule 345 §505. Capture efficiency of an ECS shall be determined either by EPA Method 204 and its submethods, or by using mass balance calculation methods in concert with EPA Methods 2, 2a, 2c, and 2d, as are incorporated by reference in County Rule 345 §505.

[County Rule 345 §502] [Locally enforceable only]

TABLE 33-1
REFINISHES APPLIED TO THE BODIES OF AUTOMOBILE/LIGHT-DUTY VEHICLES OR MOTORCYCLES
VOC LIMITS FOR REFINISH COATINGS AS APPLIED, MINUS EXEMPT COMPOUNDS

Coating category	Grams VOC per liter	Pounds VOC per gal
Pretreatment wash primers	780	6.5
Primers/primer surfacers	580	4.8
Primer sealers	550	4.6
Single/two-stage topcoats	600	5.0
Topcoats of more than two stages	630	5.2
Multi-colored topcoats	680	5.7
Specialty coatings	840	7.0
Strippable booth coatings	420	3.5

TABLE 33-2
VOC LIMITS FOR REFINISH COATING AS APPLIED TO HEAVY TRUCK BODIES
As applied, minus exempt compounds

VOC LIMIT and Effective Date	Current	November 1, 1999	November 1, 2000	November 1, 2001		
TYPE OF COATING						**ROW**

Pretreatment wash primer	780 g/L 6.5 lb/gal					**1**
Primers/primer surfacers	580 g/L 4.8 lb/gal	same	same	420 g/L 3.5 lb/gal		**2**
Primer sealers	550 g/L 4.6 lb/gal	same	same	420 g/L 3.5 lb/gal		**3**
Single stage, solid color	600 g/L 5.0 lb/gal	same	same	420 g/L 3.5 lb/gal		**4**
Single stage, metallic/iridescent	550 g/L 4.6 lb/gal	same	same	420 g/L 3.5 lb/gal		**5**
2-Stage topcoat basecoat & clearcoat	600 g/L 5.0 lb/gal per formula**	same	same	480 g/L 4.0 lb/gal per formula**		**6**
Topcoats of more than two stages	630 g/L 5.2 lb/gal per formula**	same	same	480 g/L 4.0 lb/gal for trailers**		**7**
Spot coats, 1 liter limit each stage	600 g/L 5.0 lb/gal				546g/L **(11/2/02)**	**8**
Specialty Coatings as defined by §231	840 g/L 7.0 lb/gal					**9**
Strippable booth coatings	2.0 lb/gal					

******Formula for computing the VOC content of multi-stage coating is in Rule 345 §503.1

TABLE 33-3
VOC Limits For Coating As Applied To Uncoated Vehicle Surfaces

COATING ON METAL SURFACES		
The following includes Coating, Adhesive, & Adhesive Primer	**Pounds VOC per gallon**	**Grams VOC per liter**
Air-Dried Coating	3.5	420
Baked Coating [above 200°F (93°C)]	3.0	360
COATING ON VINYL SURFACES	3.8	450
COATING ON FABRIC SURFACES	2.9	350
COATING PLASTIC SURFACES not defined as flexible	3.5	420
COATING FLEXIBLE PLASTIC SURFACES (not Vinyl)		
- Primer	4.1	490
- Color Topcoat	3.8	450
- Basecoat/Clear Coat (Combined System)	4.5	540

34. AEROSPACE MANUFACTURING AND REWORK:

A. Affected Sources

Aerospace coating operations in Buildings 922, 1018, and 1019.

B. Operational Limitations and Standards

1) The Permittee shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

a) Should the Permittee operate spray coating equipment outside of a building, the Permittee shall operate all spray coating equipment inside an enclosure which has at least three sides a minimum of eight feet in height and able to contain any object(s) being coated.

b) For three-sided enclosures, The Permittee shall direct the spray in a horizontal or downward pointing manner so that overspray is directed at the walls or floor of the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of the top of the enclosure.

c) For enclosures with three sides and a roof, or for complete enclosures, the Permittee shall direct the spray into the enclosure so that the overspray is directed away from any opening in the enclosure. No spraying shall be conducted within three feet of any open end and/or within two feet of any open top of the enclosure.

[County Rule 315 §301.1] [Locally enforceable only]

2) The Permittee shall install and operate a filtering system on any spray booth or enclosure with forced air exhaust. The filtering system shall have an average overspray removal efficiency of at least 92% by weight, as specified in writing by the manufacturer, for the type of material being sprayed. No gaps, sags or holes shall be present in the filters and all exhaust must be discharged into the atmosphere.

[County Rule 315 §301.2] [Locally enforceable only]

3) The Permittee shall be exempt from Paragraph B.1 above if the spray coating operation is one of the following:

a) Spray coating of buildings or dwellings, including appurtenances and any other ornamental objects that are not normally removed prior to coating;

b) Spray coating of facility equipment or structures which are fixed in a permanent location and cannot easily be moved into an enclosure or spray booth and which are not normally dismantled or moved prior to coating;

c) Spray coating of objects that cannot fit inside of an enclosure with internal dimensions of 10 feet wide by 25 feet long by 8 feet high;

d) Enclosures and spray booths and exhausts located entirely in a completely enclosed building, providing that any vents or openings do not allow overspray to be emitted into the outside air; or

e) Coating operations utilizing only hand-held aerosol cans.

[County Rule 315 §302] [Locally enforceable only]

4) The Permittee shall not apply any surface coating including any VOC-containing materials added to the original coating supplied by the manufacturer, which contain VOC in excess of the limits in county Rule 348, Tables 1a and 1b unless:

For building 922, the VOC emissions are vented to the Department approved fabric filter and activated carbon absorption system and the system achieves a capture and control efficiency of at least 81%. The control system shall be operated according to the Department approved O&M Plan located in Appendix E of this permit.

[County Rule 348 §§301 & 302] [SIP Rule 348 §§301 & 302]

5) The Permittee shall use one or more of the following application techniques in applying any primer or topcoat to aerospace vehicles or components:;;; brush coating; cotton-tipped swab application;; high volume low pressure (HVLP) spraying;.

[County Rule 348 §304] [SIP Rule 348 §304]

6) Cleaning solvents used in hand-wipe cleaning operations shall utilize an aqueous cleaning solvent, or have a VOC composite vapor pressure less than or equal to 45 millimeters of mercury (mm Hg) at 20°C.

For cleaning solvents used in the flush cleaning of parts, assemblies, and coating unit components, the used cleaning solvent (except for semi-aqueous cleaning solvents) must be emptied into an enclosed container or collection system that is kept closed when not in use or captured with wipers, provided they comply with the VOC handling requirements below.

Dip cleaning using solvents is subject to the requirements of County Rule 331

[County Rule 348 §305] [SIP Rule 348 §305]

7) All spray guns must be cleaned by one or more of the following methods:
   a) Enclosed spray gun cleaning system, provided that it is kept closed when not in use and leaks are repaired within 14 days from when the leak is first discovered. If the leak is not repaired by the 15th day after detection, the solvent shall be removed and the enclosed cleaner shall be shut down until the leak is repaired or its use is permanently discontinued;
   c) Unatomized discharge of solvent into a waste container that is kept closed when not in use;
   d) Disassembly of the spray gun and cleaning in a vat that is kept closed when not in use; or
   e) Atomized spray into a waste container that is fitted with a device designed to capture atomized solvent emissions.

[County Rule 348 §306] [SIP Rule 348 §306]

8) All fresh and used VOC containing material, including but not limited to cleaning solvents, coatings, thinners, rags, and their residues, shall be stored in closed, leak free, legibly labeled containers when not in use. In addition, the owner or operator must implement handling and transfer procedures to minimize spills during filling and transferring the cleaning solvent to or from enclosed systems, vats, waste containers, and other cleaning operation equipment that hold or store fresh or used cleaning solvents.

[County Rule 348 §307] [SIP Rule 348 §307]

C. Exemptions

1) General Exemptions

Cotton-tipped swabs used for very small cleaning operations and aqueous cleaning solvents are exempt from the requirements of Condition 35.B.8 of the permit.

2) Small Sources

Condition 35.B.4 of this permit shall not apply to any one facility from which the total VOC emissions from all operations subject to this rule emit less than 15 pounds (6.8 kg) per day and less than two tons (1814 kg) per year of VOCs prior to any controls.

3) Coatings

The following coatings types are exempted from the VOC limits set forth in Tables 35-1 and 35-2, herein:

a) Touch-up coatings;
b) Hand-held aerosol can operations;
c) DOD "classified" coatings;
d) Coating of space vehicles; and
e) Low usage coatings used in separate formulations in volumes of less than 50 gallons per year with a maximum exemption of 200 gallons total for such formulations applied annually.

4) Application Equipment

The following are exempt from the application equipment requirements:

a) Any situation that normally requires the use of an airbrush or an extension on the spray gun to properly reach limited access spaces;
b) The application of specialty coatings;
c) The application of coatings that contain fillers that adversely affect atomization with HVLP spray guns and that the permitting agency has determined cannot be applied by any of the application methods;
d) The application of coatings that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.) and that the permitting agency has determined cannot be applied by any of the application methods;
e) The use of airbrush application methods for stenciling, lettering, and other identification markings; and
f) Touch-up and repair operations.

5) Solvent Cleaning Operations

The following are exempt from the solvent cleaning requirements of this section of the permit:

a) Cleaning during the manufacture, assembly, installation, maintenance, or testing of components of breathing oxygen systems that are exposed to the breathing oxygen;
b) Cleaning during the manufacture, assembly, installation, maintenance, or testing of parts, subassemblies, or assemblies that are exposed to strong oxidizers or reducers (e.g., nitrogen tetroxide, liquid oxygen, hydrazine);
c) Cleaning and surface activation prior to adhesive bonding;
d) Cleaning of electronics parts and assemblies containing electronics parts;
e) Cleaning of aircraft and ground support equipment fluid systems that are exposed to the fluid, including air-to-air heat exchangers and hydraulic fluid systems;
f) Cleaning of fuel cells, fuel tanks, and confined spaces;
g) Surface cleaning of solar cells, coated optics, and thermal control surfaces;

h) Cleaning during fabrication, assembly, installation, and maintenance of upholstery, curtains, carpet, and other textile materials used on the interior of the aircraft;

i) Cleaning of metallic and nonmetallic materials used in honeycomb cores during the manufacture or maintenance of these cores, and cleaning of the completed cores used in the manufacture of aerospace vehicles or components;

j) Cleaning of aircraft transparencies, polycarbonate, or glass substrates;

m) Cleaning and solvent usage associated with research and development, quality control, or laboratory testing;

n) Cleaning operations using nonflammable liquids conducted within 5 feet of energized electrical systems. Energized electrical systems means any AC or DC electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells and tail sections; and

o) Cleaning operations identified in an Essential Use Waiver which has been reviewed and approved by the U.S. EPA and the voting parties of the International Montreal Protocol Committee [sections 604(d)(1) and (g)(2) of the Act].

[County Rule 348 §308] [SIP Rule 348 §308]

D. Monitoring and Recordkeeping Requirements

1) The Permittee shall inspect each filter installed on a spray booth or enclosure, for gaps, sags or holes once per week. Should the Permittee observe any gaps, sags or holes in any of the filters, it shall immediately repair or replace the filter and record the name of the inspector, the location of filtering system containing the filter (if more than one spray booth), and the time and date that the filter was replaced. If no gaps, sags or holes are observed in any of the filters, the Permittee shall record the name of the inspector, the location of the filtering system containing the filter (if more than one spray booth), and the time and date that the filter was inspected The Permittee shall inspect the facility for evidence of any spraying activity that occurred outside of the spray booth once per week.

[County Rule 210 §302]

2) The Permittee shall maintain on file and make available to the County upon request, a copy of the manufacturer's specifications verifying that the average overspray removal efficiency for the filter is at least 92%.

[County Rule 210 §302.1d]

3) The Permittee shall maintain a current list of aerospace coatings in use, VOC content as applied and records of the monthly usage of such materials in pounds per gallon or grams per liter. In addition, the Permittee shall:

a) Maintain a current list of all aqueous and semi-aqueous hand-wipe cleaning solvents used with corresponding water contents.

b) Maintain a current list of all vapor pressure compliant hand-wipe cleaning solvents in use with their respective vapor pressures or, for blended solvents, VOC composite vapor pressures and records of the monthly usage of such cleaning solvents.

c) Maintain a current list of all hand-wipe cleaning processes using cleaning solvents with a vapor pressure greater than 45 mm Hg and records of the monthly usage of such cleaning solvents.

4) If the Permittee uses an enclosed spray gun cleaner it shall visually inspect the seals and all other potential sources of leaks at least once per month while the spray gun cleaner is in operation. Records of these inspections shall be kept and made available upon request by the County.

[County Rule 348 §501] [SIP Rule 348 §501]

5) The Permittee shall provide and maintain (an) O&M Plan(s) for any ECS, any other emission processing equipment, and any ECS monitoring devices that are used pursuant to County Rule 348 or to an air pollution control permit. The Permittee shall submit the O&M Plan to the County for approval for each ECS and each ECS monitoring device that is used pursuant to this section of the permit. The Permittee must fully comply with all O&M Plans that it has submitted for approval, but which have not yet been approved, unless notified otherwise by the County in writing.

[County Rule 348 §303] [SIP Rule 348 §303]

6) The Permittee shall maintain records of the monthly tests of the activated carbon panels located in building 922 for a period no less than five years. The report shall state the control efficiency of the activated carbon derived from each test. If a test result shows the control efficiency for VOC to be below 81 percent, the Permittee shall cease spray painting activities in building 922 until the carbon in the panels is replaced with new or regenerated activated carbon.

[County Rule 210 §302.1 d]

E. Reporting Requirements

The Permittee shall include the following information in each semiannual compliance report:

1) A summary of the monthly test required by the O&M Plan for the spray paint booth located in building 922. The summary shall include the following;
   a) the date the analysis was performed
   b) The name of the company that performed the analysis
   c) the analytical techniques or methods used
   d) the results of such analysis

[County Rule 210 §302.1 e]

2) A detailed description if the 81% VOC control efficiency in building 922 was not achieved as required by this permit. The description shall include the date of the non-compliant control efficiency, the date and the spray coating operations in building 922 ceased, the date and a description of the corrective action taken, and the date operations resumed.

[County Rule 210 §302.1 e]

3) A summary of status concerning resolving the compliance plan of this section **[Permit Condition 34. F]**.

[County Rule 210 §302.1 e]

TABLE 34-1

PRIMER or TOPCOAT TYPE	VOC LIMITS (g/L)
All Primers (except Specialty or General Aviation Rework Facility Primers)	350 g/l
All Topcoats (except Specialty or General Aviation Rework Facility Topcoats)	420 g/l
General Aviation Rework Facility Primers	540 g/l
General Aviation Rework Facility Topcoats	540 g/l

TABLE 34-2

Type of Specialty Coating	VOC Limits (g/L)
Ablative Coating	600
Adhesion Promoter	890
Adhesive Bonding Primers: Cured at 250°F or below	850
Adhesive Bonding Primers: Cured above 250°F	1030
Adhesives: Commercial Interior	760
Adhesives: Cyanoacrylate	1,020
Adhesives: Fuel Tank	620
Adhesives: Nonstructural	360
Adhesives: Rocket Motor Bonding	890
Adhesives: Rubber-based	850
Adhesives: Structural Autoclavable	60
Adhesives: Structural Nonautoclavable	850
Antichafe Coating	660
Bearing Coating Compounds	620
Caulking and Smoothing Compounds	850
Chemical Agent-Resistant Coating	550
Clear Coating	720
Commercial Exterior Aerodynamic Structure Primer	350
Compatible Substrate Primer	350
Corrosion Prevention Compound	710
Cryogenic Flexible Primer	350
Cryoprotective Coating	600
Coatings Related To Electromagnetism And/Or Other Radiation Electric Or Radiation-Effect Coating	600
Electrostatic Discharge and Electromagnetic Interference (EMI) Coating	800
Elevated Temperature Skydrol Resistant Commercial Primer	350
Epoxy Polyamide Topcoat	420
Fire-Resistant (Interior) Coating	800
Flexible Primer	350
Flight-Test Coatings: Missile or Single Use Aircraft	420
Flight-Test Coatings: All Other	840
Fuel-Tank Coating	720
High-Temperature Coating	850

Type of Specialty Coating	VOC Limits (g/L)
Insulation Covering	740
Intermediate Release Coating	750
Lacquer	830
Maskant: Bonding Maskant	420
Maskant: Critical Use and Line Sealer Maskant	420
Maskant: Seal Coat Maskant	420
Metallized Epoxy Coating	740
Mold Release	780
Optical Anti-Reflective Coating	750
Part Marking Coating	850
Pretreatment Coating	780
Rain Erosion-Resistant Coating	420
Resin Surface Sealer	695
Rocket Motor Nozzle Coating	660
Scale Inhibitor	880
Screen Print Ink	840
Sealants: Extrudable/Rollable/Brushable Sealant	240
Sealants: Sprayable Sealant	600
Self-priming Topcoat	420
Silicone Insulation Material	850
Solid Film Lubricant	880
Specialized Function Coating	890
Temporary Protective Coating	250
Thermal Control Coating	800
Wet Fastener Installation Coating	675
Wing Coating	420

F. Compliance Plan for Spray Coating of Building 922

1) Within thirty (30) days after the issuance of this permit, the Permittee shall submit documentation consisting of manufacturer's data sheets or an engineering evaluation to verify that the control device (activated carbon filtration) achieves 81% control efficiency by weight for VOC emissions.

2) MCESD will evaluate the documentation and;

a) If MCESD agrees with the documentation submitted verifies a control efficiency of no less than 81% by weight, the Control Officer will issue a letter to LAFB stating that the Permittee has fulfilled all the obligations of this compliance plan, **[Permit Condition 34. F]** or;

b) If MCESD does not agree that the documentation submitted verifies a control efficiency of greater than or equal to an 81% by weight, the Control Officer will issue a letter to LAFB stating that the Permittee has not shown the necessary control efficiency and the Permittee shall use only coatings, primers and top coats compliant with Table 34-1 and 34-2 from that time forward until such a time that source testing can be performed in accordance with **[Permit Condition 9]** to verify a control efficiency greater to or equal to 81%..

[County Rule 210 §302.1 b]

35. SOLVENT DEGREASING OPERATIONS:

A. Affected Sources

Solvent degreasers identified in the Equipment List attached to this permit as Appendix A.

B. Operational Limitations and Standards

1) For Cold Cleaning Solvent Degreasers

NOTE: The following permit conditions do not cover the following situations:

a) Vapor degreasers

b) In line cleaners

c) Use of cleaning solvent that is heated, agitated or nonconforming (i.e. has a vapor pressure greater than 1 mm Hg before Oct 31, 2001 and 1 mm Hg after Nov. 1, 2001)

2) All cleaning machines shall be one of the following types:

a) Batch loaded cold cleaners with remote reservoir;

b) Batch loaded cold cleaners without a remote reservoir (such as solvent dip tan);

c) Shall use only low VOC cleaner (A low VOC cleaner is any solution or homogeneous suspension that, as used, contains less than 50 grams of VOC per liter of material (0.42 lb VOC/gal) or is at least 95% water by weight or volume as determined by an applicable test method in §502 of County Rule 331); or

[County Rule 331 §305] [SIP Rule 331 §305]

3) Solvent Handling Requirements

All cleaning-solvent, including solvent soaked materials, shall be kept in closed leak-free containers that are opened only when adding or removing material. Rags used for wipe cleaning shall be stored in closed containers when not in use. Each container shall be clearly labeled with its contents. If any cleaning-solvent escapes from a container:

a) Wipe up or otherwise remove immediately if in accessible areas.

b) For areas where access in not feasible during normal production, remove as soon as reasonably possible.

c) Unless records show that VOC-containing cleaning material was sent offsite for legal disposal, it will be assumed that it evaporated on site.

[County Rule 331 §301] [SIP Rule 331 §301]

4) Equipment Requirements for Cleaning Machines

a) The Permittee shall provide a leak-free container (degreaser) for the solvents and the articles being cleaned. The VOC-containment portion shall be impervious to VOC-containing liquid and vapors. No surface of any freeboard required by this rule shall have an opening or duct through which VOC can escape to the atmosphere except as required by OSHA.

[County Rule 331 §302.1] [SIP Rule 331 §302.1]

b) The Permittee shall maintain and operate all cleaning machine equipment required by this Permit.

[County Rule 331 §302.2] [SIP Rule 331 §302.2]

5) Operating & Signage Requirements

a) The Permittee shall conform to the following operating requirements when cleaning with cleaning-solvents other than Low-VOC Cleaners:

(1) Comfort fans shall not be used near cleaning machines;

(2) Do not remove any device designed to cover the solvent unless processing work in the cleaning machine or maintaining the machine;

(3) Drain cleaned parts for at least (15) fifteen seconds after cleaning or until dripping ceases, whichever is later;

(4) If using a cleaning-solvent spray system:

(a) Use only a continuous, undivided stream (not a fine, atomized, or shower type spray).

(b) Pressure at the orifice from which the solvent emerges shall not exceed (10) ten psig and shall not cause liquid solvent to splash outside the solvent container.

(c) In an in-line cleaning machine, a shower-type spray is allowed, provided that the spraying is conducted in a totally confined space that is separated from the environment.

(d) Exceptions to the foregoing subsections 1), 2), and 3) are provided for in Special Non-vapor Cleaning Situations in the section titled the same below.

(5) The Permittee shall not cause agitation of a cleaning-solvent in a cleaning machine by sparging with air or other gas. Covers shall be placed over ultrasonic cleaners when the cleaning cycle exceeds fifteen (15) seconds;

(6) The Permittee shall not place porous or absorbent materials in or on a cleaning machine. This includes, but is not limited to, cloth, leather, wood, and rope. No object with a sealed wood handle, including a brush, is allowed;

(7) The ventilation rate at the cleaning machine shall not exceed 65 cfm per square foot of evaporative surface (20 $m^3/min/m^2$), unless that rate must be changed to meet a standard specified and certified by a Certified Safety Professional, a Certified Industrial Hygienist, or a licensed professional engineer experienced in ventilation, to meet health and safety requirements;

(8) Limit the vertical speed of mechanical hoists moving parts in and out of the cleaning machine to a maximum of 2.2 inches per second and eleven (11) ft/min (3.3 m/min);

(9) The Permittee shall prevent cross contamination of solvents regulated by §304 of Rule 331 with solvents that are not so regulated. Use signs, separated work-areas, or other effective means for this purpose. This includes those spray gun cleaning solvents that are regulated by another rule.

[County Rule 331 §303.1] [SIP Rule 331 §303.1]

b) When using cleaning-solvent, other than Low-VOC Cleaner, in any solvent cleaning machine (degreaser) or dip tank, the Permittee shall provide the following signage requirements on the machine, or within 3¼ feet (1 meter) of the machine, a permanent, conspicuous label, or placard which includes, at a minimum, each of the following applicable instructions, or its equivalent:
   (1) "Keep cover closed when parts are not being handled." (This is not required for remote reservoir cleaners.)
   (2) "Drain parts until they can be removed without dripping."
   (3) "Do not blow off parts before they have stopped dripping."
   (4) "Wipe up spills and drips as soon as possible; store used spill rags [or 'wiping material'] in covered container."
   (5) "Don't leave cloth or any absorbent materials in or on this tank."
   (6) For cleaning machines with moving parts such as hoists, pumps, or conveyors, post: "Operating instructions can be obtained from _____" where the Permittee shall list a person or place where the instructions are available.

[County Rule 331 §303.2] [SIP Rule 331 §303.2]

6) Required Solvent Specifications
All cleaning solvents, except Low-VOC Cleaners, shall be conforming solvents. After A conforming solvent is one that has a total VOC vapor pressure at 68ºF (20ºC) not exceeding 1 millimeter of mercury column maximum total VOC vapor pressure.

[County Rule 331 §304.1] [SIP Rule 331 §304.1]

7) Batch Cleaning Machines
   a) The Permittee shall equip each batch cleaning machine with remote reservoir including the cabinet type(s), with the following:
      (1) A sink-like work area or basin which is sloped sufficiently towards the drain so as to prevent pooling of cleaning-solvent.
      (2) A single, unimpeded drain opening or cluster of openings served by a single drain for the cleaning-solvent to flow from the sink into the enclosed reservoir. Such opening(s) shall be contained within a contiguous area not larger than 15.5. square inches (100 cm^2).
      (3) Provide a means for drainage of cleaned parts such that the drained solvent is returned to the cleaning machine.

[County Rule 331 §305.1] [SIP Rule 331 §305.1]

   b) The Permittee shall equip each batch cleaning machine without a remote reservoir with all of the following:
      (1) Have and use an internal drainage rack or other assembly that confines within the freeboard all cleaning-solvent dripping from parts and returns it to the hold of the cleaning machine (degreaser).
      (2) Have an impervious cover which when closed prevents cleaning-solvent vapors in the cleaning machine from escaping into the air/atmosphere when not processing work in the cleaning machine. The cover shall be fitted so that in its closed position the cover is between the cleaning-solvent and any lip exhaust or other safety vent, except that such position of cover and

venting may be altered by an operator for valid concerns of flammability established in writing and certified to by a Certified Safety Professional or a Certified Industrial Hygienist to meet health and safety requirements.

(3) The freeboard height shall be not less than 6 inches (15.2 cm). Freeboard height for batch cleaning machines is the vertical distance from the solvent/air interface to the least elevated point of the top-rim when the cover is open or removed, measured during idling mode.

(4) The freeboard zone shall have a permanent, conspicuous mark that locates the maximum allowable solvent level which conforms to the applicable freeboard requirements.

[County Rule 331 §305.2] [SIP Rule 331 §305.2]

8) Special Non-Vapor Cleaning Requirements

a) The Permittee shall operate and equip the devices as follows when blasting or misting with conforming solvents:

(1) The device shall have internal drainage, a reservoir or sump, and a completely enclosed cleaning chamber, designed so as to prevent any perceptible liquid from emerging from the device; and

(2) The device shall be operated such that there is no perceptible leakage from the device except for incidental drops from drained, removed parts.

[County Rule 331 §307.1] [SIP Rule 331 §307.1]

b) The Permittee shall use a sealed system for all blasting or misting with a non-conforming solvent.

[County Rule 331 §307.2] [SIP Rule 331 §307.1]

c) Cleaning systems using cleaning-solvent that emerges from an object undergoing flushing with a visible mist or at a pressure exceeding 10 psig, shall comply as follows:

(1) For conforming solvents, use a containment system that is designed to prevent any perceptible cleaning-solvent liquid from becoming airborne outside the containment system, such as a completely enclosed chamber.

(2) Use a sealed system for non-conforming solvents.

[County Rule 331 §307.3] [SIP Rule 331 §307.3]

C. Monitoring and Recordkeeping Requirements

1) The Permittee shall maintain a current list of cleaning-solvents; state the VOC-content of each in pounds VOC per gallon of material or grams per liter of material.

[County Rule 331 §501.1] [SIP Rule 331 §501.1]

2) If the Permittee uses any cleaning-solvent subject to the vapor-pressure limits of County Rule 331 §304.1 shall have on site the written value of the total VOC vapor-pressure of each such solvent by November 1, 1999, in one of the following forms:

a) A manufacturer's technical data sheet,

b) A manufacturer's safety data sheet (MSDS), or

c) Actual test results.

[County Rule 331 §501.1] [SIP Rule 331 §501.1]

3) The Permittee shall record the amount of cleaning-solvent used at the end of each month for the previous month. Show the type and amount of each make-up and all other cleaning-solvent.

[County Rule 331 §501.2a] [SIP Rule 331 §501.2]

4) Annually the Permittee shall document the use of concentrate that is used only in the formulation of Low VOC Cleaner.

[County Rule 331 §501.2b] [SIP Rule 331 §501.2b]

5) Annually the Permittee may, for purposes of recording usage, give cleaning-solvents of similar VOC content a single group-name, distinct from any product names in the group. The total usage of all products in that group are then recorded under just one name. (In such case the Permittee shall also keep a separate list that identifies the product names of the particular solvents included under the group name.) To the group name shall be assigned the highest VOC content among the members of that group, rounded to the nearest 10^{th} of a pound of VOC per gallon of material, or to the nearest gram VOC per liter of material.

[County Rule 331 §501.2c] [SIP Rule 331 §501.2c]

D. Reporting Requirements

The Permittee shall include the following information in each semiannual compliance report:

1) Certification that the operational requirements, specifically applicable The Permittee's type of cleaning, continue to be in compliance;
2) A summary of the listed cleaning-solvents currently used at the facility and state the VOC-content of each in VOC per gallon of material or grams per liter of material;
3) Certification that monthly and annual recordkeeping was performed as directed in the monitoring/recordkeeping requirements above; and
4) A summary of any testing that may have been performed during the period.

[County Rule 210 302.1e(1)]

36. ABRASIVE BLASTING:

Building 907

A. Conditions for All Abrasive Operations:

1) Allowable Emissions:

a) The Permittee shall not discharge into the atmosphere from any abrasive blasting operation any air contaminant for an observation period or periods aggregating more than three minutes in any sixty minute period an opacity equal to or greater than 20 percent. An indicated excess will be considered to have occurred if any cumulative period of 15-second increments totaling more than three minutes within any sixty minute period was in excess of the opacity standard.

[County Rule 312 §305] [Locally enforceable only]

b) The Permittee shall not discharge into the atmosphere from any abrasive blasting any air contaminant for a period or periods aggregating more than three minutes in any one-hour period which is a shade or density darker than 20 percent opacity.

[SIP Rule 312 §301]

2) Operational Requirements:

All abrasive blasting operation shall use confined blasting to control air emissions:

[SIP Rule 312 §302]

3) Recordkeeping Requirements *(for blasting operations that occur periodically)*

The Permittee shall keep the following records onsite and maintain all of the specified records for a total of five years and shall make them available to the control officer upon request:

a) The date the blasting occurs
b) The blasting equipment that is operating
c) A description of the type of blasting
d) A description of the ECS associated with the blasting operation
e) The type and amount of solid abrasive material consumed on a monthly basis. Include name of certified abrasive used, as applicable
f) A copy of the most recent CARB certification list, if applicable

[County Rule 312 §501][Locally enforceable only]

g) The Permittee shall maintain records of the key system operating parameters for the ECS required by the O&M Plan.
h) The Permittee shall log all visual observations and readings including the following:
   (1) The date and time that a visible observation or Method 9 reading was taken;
   (2) The name of the person who made the observation or reading;
   (3) Whether or not visible emissions were present;
   (4) The opacity of visual emissions determined by a Method 9 reading, if applicable;
   (5) A description of any corrective actions taken, including date, if applicable; and
   (6) Any other related information.

[County Rule 210 §302.1]

4) Opacity Readings

The Permittee shall weekly perform the monitoring and recordkeeping requirements specified in Permit Conditions [20. C, D, & E] for the abrasive blasting unit located in building 907. All visible emission and Method 9 readings must be performed during normal operation of abrasive blasting activities.

5) Exemptions:
The abrasive blasting permit conditions in this section do not apply to the following operations:
a) Self-contained, enclosed abrasive blasting equipment that is vented inside a building with the exhaust directed away from any opening to the building exterior, or
b) Hydroblasting

[County Rule 312 §103][Locally enforceable only]

B. Specific Conditions For Confined Abrasive Blasting with a Forced Air Exhaust:
1) Operational Requirements:
a) Dry abrasive blasting in a confined enclosure with a forced exhaust shall be conducted by venting to an Emission Control System (ECS) with a submitted and approved Operation and Maintenance (O&M) Plan on file with the Department.

[County Rule 312 §§303 &304] [Locally enforceable only]

b) The ECS shall be operated and maintained in accordance within operating parameters specified in the O&M Plan most recently approved in writing by the control officer. The O&M Plan shall contain at a minimum, the operating parameters and maintenance procedures acceptable to the Control Officer.

[County Rule 210 §302]

c) Work Practices:
At the end of the work shift, the owner or operator shall clean up spillage, carryout, and/or track out of any spent abrasive material with a potential to be transported during a wind event.

[County Rule 312 §308.2][Locally enforceable only]

2) ECS Monitoring and Recordkeeping Requirements
The Permittee shall make weekly observations for visible emissions to the ambient air during a time period that the abrasive blasting equipment is being operated. The Permittee shall keep a log of the visual observations. This log shall contain a description of the abrasive blasting operation and ECS associated with it, the name of the person who made the observation, the date and approximate time of the reading, a statement whether or not any visible emissions were observed and any other related information. If abrasive blasting was not performed during the entire week and because of this the observations of visible emissions could not be performed, a statement to that fact shall be documented. If there are visible emissions detected, the Permittee must follow all the opacity requirements contained within this Permit.

[County Rule 300] [County Rule 210 §302.1c]

3) Reporting:

The semi-annual report shall contain a summary of the visible emission readings, a list of dates that the ECS operated outside the operating parameters specified in the O&M Plan and the CARB abrasive used to comply with this rule, if applicable

[County Rule 210 §302.1e]

C. Testing Requirements

If there is a reason to suspect that the surface that is to be abraded is covered in lead paint and the Permittee intends to use CARB certified abrasive blasting media as the control device, the Permittee shall conduct testing to determine if the lead content of the paint is less than 0.1 percent.

[County Rule 210 §302.1c(2)] [Locally enforceable only]

37. PERMIT CONDITIONS FOR ARCHITECTURAL COATINGS:

A. Affected Sources

Applies basewide.

B. Operational Limitations

1) The Permittee shall not apply any architectural coating manufactured after July 13, 1988, which is recommended for use as a bituminous pavement sealer unless it is an emulsion type coating.

[County Rule 335 §301] [SIP Rule 335 §301]

2) The Permittee shall not apply any non-flat architectural coating manufactured after July 13, 1990, which contains more than 2.1 lbs (250 grams/liter [g/l]) of VOCs per gallon (gal) of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings.

The Permittee shall not apply any architectural coating that exceeds the limits for Specialty Coatings. Limits are expressed in pounds of VOC per gal of coating as applied, excluding water and any colorant added to tint bases.

[County Rule 335 §§303 & 305] [SIP Rule 335 §§303 & 305]

3) Specialty Coating Limits

Coating	(lb/gal)
Concrete Curing Compounds-	2.9
Dry Fog Coating	
Flat	3.5
Non-flat	3.3
Enamel Undercoaters	2.9
General Primers, Sealers and Undercoaters	2.9
Industrial Maintenance Primers and Topcoats	
Alkyds	3.5
Catalyzed Epoxy	3.5
Bituminous Coating Materials	3.5
Inorganic Polymers	3.5
Vinyl Chloride Polymers	3.5
Chlorinated Rubbers	3.5
Acrylic Polymers	3.5

Urethane Polymer	3.5
Silicones	3.5
Unique Vehicles	3.5
Lacquers	5.7
Opaque Stains	2.9
Wood Preservatives	2.9
Quick Dry Enamels	3.3
Roof Coatings	2.5
Semi-transparent Stains	2.9
Semi-transparent and Clear Wood Preservatives	2.9
Opaque Wood Preservatives	2.9
Specialty Flat Products	3.3
Specialty Primers, Sealers and Undercoaters	2.9
Stains, All	2.9
Traffic Coatings	
Applied to Public Streets and Highways	2.1
Applied to other Surfaces	2.1
Black Traffic Coatings	2.1
Varnishes	2.9
Waterproof Mastic Coating	2.5
Waterproof Sealers	3.3
Wood Preservatives Except Below Ground	2.9

[County Rule 335 §305] [SIP Rule 335 §305]

4) The Permittee shall not apply any flat architectural coating which contains more than 2.1 lbs (250 g/l) of VOC/gal of coating, excluding water and any colorant added to tint bases. These limits do not apply to specialty coatings.

[County Rule 335 §304] [SIP Rule 335 §304]

5) The following coatings are exempt from the architectural coatings requirements specified in the permit conditions above:
   a) Architectural coatings supplied in containers having capacities of one quart or less.
   b) Architectural coatings recommended by the manufacturer for use solely as one or more of the following:
      (1) Below ground wood preservative coatings.
      (2) Bond breakers.
      (3) Fire retardant coatings.
      (4) Graphic arts coatings (sign paints)
      (5) Mastic texture coatings.
      (6) Metallic pigmented coatings.
      (7) Multi-colored paints.
      (8) Quick-dry primers, sealers and undercoaters.
      (9) Shellacs.
      (10) Swimming pool paints.
      (11) Tile-like glaze coatings.

[County Rule 335 §§306 & 307] [SIP Rule 335 §§306 & 307]

C. Recordkeeping and Monitoring

The Permittee shall keep the material list of all coatings used. The material list should contain the name of each coating, short description of the material, lbs of VOCs per gal of coating, excluding water and colorant added to tint bases and amount used. If the coating is exempt from the VOCs content requirements, the justification for the determination shall be documented and kept on file.

[County Rule 210 §302.1.c(2)]

D. Reporting Requirements

The Permittee shall file a semiannual compliance report and include in this report the compliance status of the source during the six-month period The initial compliance report shall reflect the compliance status of the source beginning with the date of the permit issuance. Compliance report shall include material list and a list of the coatings that are exempt from the VOCs content requirements.

[County Rule 210 §302.1d]

E. Testing

If required by the Control Officer testing procedures to determine compliance with prescribed VOC limits shall be consistent with Reference Methods 24 and 24A in the Arizona Testing Manual for Air Pollutant Emissions.

[County Rule 335 §500] [SIP Rule 335 §500]

38. PERMIT CONDITIONS FOR CUTBACK AND EMULSIFIED ASPHALT:

A. Affected Sources

Applies basewide.

B. Operational Limitations

The Permittee shall not use or apply the following materials for paving, construction, or maintenance of highways, streets, driveways, parking lots or for any other use to which County Rule 340 §300 and SIP Rule 340 §300 applies:

1) Rapid cure cutback asphalt.
2) Any cutback asphalt material, road oils, or tar which contains more than 0.5 percent by volume VOCs which evaporate at 500^{o}F (260 ^{o}C) or less using ASTM Test Method D 402-76.
3) Any emulsified asphalt or emulsified tar containing more than 3.0 percent by volume VOCs which evaporates at 500^{o}F (260^{o}C) or less as determined by ASTM Method D244-89.

[County Rule 340 §301] [SIP Rule 340 §301]

The Permittee shall not store for use any emulsified or cutback asphalt product which contains more than 0.5 percent by volume solvent-VOC unless such material lot includes a designation of solvent-VOC content on data sheet(s) expressed in percent solvent-VOC by volume.

[County Rule 340 §303] [SIP Rule 340 §303]

C. Exemptions

The provisions of these Permit Conditions shall not apply to asphalt that is used solely as a penetrating prime coat and which is not a rapid cure cutback asphalt. Penetrating prime coats do not include dust palliatives or tack coats.

[County Rule 340 §302.1] [SIP Rule 340 §302.1]

The Permittee may use up to 3.0 percent solvent-VOC by volume for batches of asphalt rubber which cannot meet paving specifications by adding heat alone only if request is made to the Control Officer, who shall evaluate such requests on a case-by-case basis. The Permittee shall keep complete records and full information is supplied including savings realized by using discarded tires. The Permittee shall not exceed 1100 lbs (500 kilograms) usage of solvent-VOC in asphalt rubber in a calendar year unless the Permittee can demonstrate that in the previous 12 months no solvent-VOC has been added to at least 95 percent by weight of all the asphalt rubber binder made by the Permittee or caused to be made for the Permittee. This Permit Condition does not apply to batches that yield 0.5 percent or less solvent-VOC evaporated using the test in County Rule 340 §502.1.

[County Rule 340 §302.3] [SIP Rule 340 §302.3]

D. Recordkeeping

The Permittee shall keep daily records of the amount and type of asphaltic/bituminous material received and used, as well as the solvent-VOC content of this material. Material Safety Data Sheets or technical data sheets shall be kept available.

[County Rule 210 §302.1c] [County Rule 340 §501] [SIP Rule 340 §501]

E. Testing Methods

If required by the Control Officer the applicable testing procedures contained in County Rule 340 §502 and SIP Rule 340 §502 shall be used to monitor for compliance with these Permit Conditions.

[County Rule 340 §502] [SIP Rule 340 §502]

F. Reporting Requirements

The Permittee shall file a semiannual compliance report starting from this permit issuance date within 30-days of the end of the 6-month period to the Division with attention to Large Sources Compliance Supervisor containing the dates and description of any usage of cutback and emulsified asphalt.

[County Rule 210 §302.1e(1)] [Locally enforceable only]

39. Turbine Engine Test Cells:

A. Monitoring and Recordkeeping Requirements

1) The Permittee shall conduct a weekly facility walk-through and observe visible emissions from any source capable of emitting any air contaminant, other than uncombined water, to the ambient air. The Permittee shall log the visual observations, including the date and approximate time when that reading, location of visible emissions or a statement that no visible emissions were observed, name of the person who took the observation and any other related information.

[County Rule 300] [County Rule 210 §302.1c(1)] [SIP Rule 30]

2) The Permittee shall log the following information for all visible emissions observations and Method 9 opacity readings required by this permit:
   a) The date and time the visible emissions observation or Method 9 opacity reading was taken;
   b) The name of the observer;
   c) Whether or not visible emissions were present;
   d) If visible emissions are present and the controls and facility processes are operating in a mode other than their normal operating conditions, such as startup or shutdown, a description of the operating conditions at the time that the opacity is observed;
   e) The opacity determined by a Method 9 opacity reading, if a Method 9 reading is required by these permit conditions;
   f) If applicable, a description of any corrective action(s) taken, including the date of such action(s); and
   g) Any other related information.

   [County Rule 300] [County Rule 210 §302.1]

3) If visible emissions, other than uncombined water, are observed being discharged into the ambient air, the Permittee shall monitor for compliance with the opacity standards specified in this permit by having a certified visible emissions evaluator determine the opacity of the visible emissions being discharged into the ambient air using the techniques specified in EPA Reference Method 9.

   If the Permittee has not received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of visible emissions, the initial Method 9 opacity reading shall be taken within three days of observing visible emissions. If the Permittee has received either a compliance status notification or notice of violation regarding an opacity standard in the 12 months preceding the observation of emissions, the initial Method 9 opacity reading shall be taken within one day of observing visible emissions. If the emitting equipment is not operating on the day that the initial Method 9 opacity reading is required to be taken, then the initial Method 9 opacity reading shall be taken the next day that the emitting equipment is in operation. If the problem causing the visible emissions is corrected before the initial Method 9 opacity reading is required to be performed, and there are no visible emissions (excluding uncombined water) observed from the previously emitting equipment while the equipment is in normal operation, the Permittee shall not be required to conduct the Method 9 opacity readings.

   Follow-up Method 9 opacity readings shall be performed by a certified visible emissions evaluator while the emitting equipment in its standard mode of operation in accordance with the following schedule:

   Daily:
   a) Except as provided in paragraph 3 of this Permit Condition, a Method 9 opacity reading shall be conducted each day that the emitting equipment is operating until a minimum of 14 daily Method 9 readings have occurred.

b) If the Method 9 opacity readings required by this Permit Condition are less than 20% for 14 consecutive days, the frequency of Method 9 opacity readings may be decreased to weekly, in accordance with paragraph 2 of this Permit Condition.

Weekly:

a) If the permittee has obtained 14 consecutive daily Method 9 readings which do not exceed 20% opacity, the frequency of Method 9 readings may be decreased to once per week for any week in which the equipment is operated.

b) If the opacity measured during a weekly Method 9 reading exceeds 20%, the frequency of Method 9 opacity readings shall revert to daily, in accordance with paragraph 1 of this Permit Condition.

c) If the opacity measured during the required weekly Method 9 readings never exceeds 20%, the Permittee shall continue to obtain weekly opacity readings until the requirements of paragraph 3 of this Permit Condition are met.

4) Cease Follow-up Method 9 Opacity Monitoring:
Regardless of the applicable monitoring schedule, follow-up Method 9 opacity readings may cease if the emitting equipment, while in its standard mode of operation, has no visible emissions, other than uncombined water, during every observation taken during a Method 9 procedure.

[County Rule 210 §302.1c]

5) Opacity Readings

a) Opacity shall be determined by observations of visible emissions conducted in accordance with 40 CFR Part 60 Appendix A, Method 9.

[40 CFR 60.11.b] [County Rule 300 §501]

b) Opacity of visible emissions from intermittent sources as defined by County Rule 300 §201 shall be determined by observations conducted in accordance with 40 CFR Part 60 Appendix A, Method 9, except that at least 12 rather than 25 consecutive readings shall be required at 15-second intervals for the averaging time.

[County Rule 300 §502][Locally enforceable only]

B) Reporting

The Permittee shall include the following in each semi-annual Compliance Report:

1) The dates of any week that the required visible emissions observations were not taken, an explanation for the deviation from the monitoring requirement, and a description of any action taken to ensure that future observations are performed, if applicable;
2) The source and location from which visible emissions were observed;
3) Any date which visible emissions were observed;
4) The approximate time of the observation;
5) The name of the observer;
6) A description of any corrective actions taken, if any, to reduce the visible emissions; and
7) If a follow-up Method 9 reading was required, the opacity of the emissions determined by Method 9, a copy of the visual determination of opacity record showing all information required by the Method and any other related information.

[County Rule 210 §302.1e]

40. PERMIT SHIELD

Compliance with the conditions of this Permit shall be deemed compliance with the applicable requirements identified in Appendix B of this Permit. The Permit Shield shall not extend to minor permit revisions.

[County Rule 210 §407][40 CFR Part 70 §71.6(f)]

APPENDIXES

APPENDIX A
Equipment List

Identified below is a summary of equipment provided by Luke AFB that has the potential to emit criteria air pollutants (at any level above "insignificant", as defined in Maricopa County Rule 100). The equipment was reviewed for applicability to federal, state and local air pollution control requirements.

Emergency Generator Units	
1.	Five 60 kW diesel-powered electric generators located at Buildings (Bldgs) 11, 284, 901, 1034, and 1074
2.	Four 100 kW diesel-powered electric generators located at Bldgs 176, 316, 343, 793
3.	Ten 15 kW diesel-powered electric generators located at Bldgs 179, 910, 1002, 1047, 1056, 1057, 1086, 1380, 2104, and 2105
4.	Two 125 kW diesel-powered electric generators located at Bldgs 310 and 979
5.	Two 350 kW diesel-powered electric generators located at Bldgs 321 and 988
6.	Two 30 kW diesel-powered electric generators located at Bldgs 328 and 1049
7.	One 45 kW diesel-powered electric generator located at Bldg 450
8.	Three 250 kW diesel-powered electric generators located at Bldgs 122, 453 and 952
9.	Two 200 kW diesel-powered electric generators located at Bldgs 815 and 1387
10.	Two 50 kW diesel-powered electric generators located at Bldgs 927 and 1040
11.	Two 20 kW diesel-powered electric generators located at Bldgs 961 and 1365
12.	One 400 kW diesel-powered electric generator located at Bldg 1013
13.	Two 800 kW diesel-powered electric generators located at Bldg 1132
14.	One 175 kW diesel-powered electric generator located at Bldg 1217
15.	One 450 kW diesel-powered electric generator located at Bldg 1239
16.	One 80 kW diesel-powered electric generator located at Bldg 1379
17.	One 25 kW diesel-powered electric generator located at Bldg 1550
18.	Four 5 kW diesel-powered electric generators located at ADCC, DCC, SRC, and Supply
19.	One 20 kW natural gas-powered electric generator located at Bldg 470
20.	One 50 kW natural gas-powered electric generator located at Bldg 969
Peak-Shaving Generator Unit	
1.	One 1250 kW natural gas-powered peak-shaving generator located at Bldg 1158
Small Turbine Engine Testing	
1.	JP-8 fuel-powered small aircraft turbine engines, engine type F100-PW-220/220E, testing at Bldgs 1006, 1012, and 1016
Soil Vapor Extraction (SVE) Unit	
1.	One Ford 460 CID 0.419 MMBtu/hr internal combustion engine powered by propane and used to extract and combust diesel and JP-8 vapors at a 99% VOC destruction efficiency, located at Bldg 353

Boilers (Heat input values listed are at 100% load)	
1.	Three 0.3 MMBtu/hr boilers fueled by natural gas located at Bldgs 25, 247, and 988
2.	One 1.74 MMBtu/hr boiler fueled by natural gas located at Bldg 26

3.	Two 0.525 MMBtu/hr boilers fueled by natural gas located at Bldg 122 and 176
4.	One 1.75 MMBtu/hr boiler fueled by natural gas located at Bldg 133
5.	One 0.659 MMBtu/hr boiler fueled by natural gas located at Bldg 156
6.	One 2.16 MMBtu/hr boiler fueled by natural gas located at Bldg 161
7.	Three 0.55 MMBtu/hr boilers fueled by natural gas located at Bldgs 219, 569, and 1515
8.	Two 0.972 MMBtu/hr boilers fueled by natural gas located at Bldg 235
9.	One 0.015 MMBtu/hr boiler fueled by natural gas located at Bldg 291
10.	Three 0.15 MMBtu/hr boilers fueled by natural gas located at Bldgs 338 and 1236 (2)
11.	Two 0.76 MMBtu/hr boilers fueled by natural gas located at Bldgs 339 and 485
12.	Three 0.4 MMBtu/hr boilers fueled by natural gas located at Bldgs 343, 931, and 936
13.	Three 0.42 MMBtu/hr boilers fueled by natural gas located at Bldgs 400, 547, and 904
14.	One 0.16 MMBtu/hr boiler fueled by natural gas located at Bldg 404
15.	Two 1.056 MMBtu/hr boilers fueled by natural gas located at Bldgs 408 and 431
16.	Four 0.6 MMBtu/hr boilers fueled by natural gas located at Bldgs 415, 581, 610, and 915
17.	Five 0.25 MMBtu/hr boilers fueled by natural gas located at Bldgs 416, 450, 453, and 905 (2)
18.	One 0.49 MMBtu/hr boiler fueled by natural gas located at Bldg 417
19.	Five 0.35 MMBtu/hr boilers fueled by natural gas located at Bldgs 445, 470, 616A, 688, and 938
20.	Two 0.216 MMBtu/hr boilers fueled by natural gas located at Bldgs 447 and 461
21.	One 0.489 MMBtu/hr boiler fueled by natural gas located at Bldg 452
22.	Two 0.56 MMBtu/hr boilers fueled by natural gas located at Bldgs 500 and 1525
23.	Two 0.665 MMBtu/hr boilers fueled by natural gas located at Bldgs 528 and 530
24.	One 0.825 MMBtu/hr boiler fueled by natural gas located at Bldg 533
25.	Ten 0.5 MMBtu/hr boilers fueled by natural gas located at Bldgs 542, 583, 617A, 983 (2), 985 (4), and 2201
26.	One 2.4 MMBtu/hr boiler fueled by natural gas located at Bldg 545
27.	Two 0.9 MMBtu/hr boilers fueled by natural gas located at Bldgs 546 and 993
28.	Four 0.75 MMBtu/hr boilers fueled by natural gas located at Bldgs 587, 640, 723, and 962
29.	Two 1.375 MMBtu/hr boilers fueled by natural gas located at Bldgs 616B and 930
30.	Two 1.2 MMBtu/hr boilers fueled by natural gas located at Bldgs 617B and 668
31.	One 4.5 MMBtu/hr boiler fueled by natural gas located at Bldg 635A
32.	Two 1.05 MMBtu/hr boilers fueled by natural gas located at Bldgs 635B and 750
33.	One 2.86 MMBtu/hr boiler fueled by natural gas located at Bldg 636A
34.	One 0.85 MMBtu/hr boiler fueled by natural gas located at Bldg 636B
35.	One 2.89 MMBtu/hr boiler fueled by natural gas located at Bldg 637
36.	Two 0.36 MMBtu/hr boilers fueled by natural gas located at Bldgs 663 and 673
37.	Four 1.5 MMBtu/hr boilers fueled by natural gas located at Bldgs 687, 700, 961, and 1022
38.	One 0.125 MMBtu/hr boiler fueled by natural gas located at Bldg 799
39.	One 3.5 MMBtu/hr boiler fueled by natural gas located at Bldg 820
40.	Two 1.0 MMBtu/hr boilers fueled by natural gas located at Bldgs 840 and 1143
41.	One 0.09 MMBtu/hr boiler fueled by natural gas located at Bldg 859
42.	Two 1.25 MMBtu/hr boilers fueled by natural gas located at Bldgs 913 and 914
43.	One 0.395 MMBtu/hr boiler fueled by natural gas located at Bldg 917
44.	Four 4.0 MMBtu/hr boilers fueled by natural gas located at Bldgs 922 (2) and 1540 (2)
45.	One 0.675 MMBtu/hr boiler fueled by natural gas located at Bldg 927
46.	Two 0.2 MMBtu/hr boilers fueled by natural gas located at Bldgs 927 and 1365

47.	One 0.26 MMBtu/hr boiler fueled by natural gas located at Bldg 928
48.	Two 0.63 MMBtu/hr boilers fueled by natural gas located at Bldgs 930A and 1019
49.	One 0.565 MMBtu/hr boiler fueled by natural gas located at Bldg 931
50.	One 0.7 MMBtu/hr boiler fueled by natural gas located at Bldg 937
51.	One 0.355 MMBtu/hr boiler fueled by natural gas located at Bldg 942
52.	One 1.795 MMBtu/hr boiler fueled by natural gas located at Bldg 945
53.	One 0.78 MMBtu/hr boiler fueled by natural gas located at Bldg 959
54.	One 0.325 MMBtu/hr boiler fueled by natural gas located at Bldg 997
55.	One 0.45 MMBtu/hr boiler fueled by natural gas located at Bldg 1018
56.	One 1.67 MMBtu/hr boiler fueled by natural gas located at Bldg 1019
57.	Three 3.36 MMBtu/hr boilers fueled by natural gas located at Bldg 1132
58.	One 2.97 MMBtu/hr boiler fueled by natural gas located at Bldg 1150
59.	One 0.136 MMBtu/hr boiler fueled by natural gas located at Bldg 1236
Chillers (Heat input values listed are at 100% load)	
1.	One 0.42 MMBtu/hr chiller fueled by natural gas located at Bldg 547
Ovens	
1.	One 0.2 MMBtu/hr oven fueled by natural gas located at Bldg 937
2.	One 0.7 MMBtu/hr oven fueled by natural gas located at Bldg 937
Aboveground Storage Tanks (ASTs) and Underground Storage Tanks (USTs)	
1.	One 233,193-gallon JP-8 aircraft fuel internal floating roof AST located at Bldg 350
2.	One 413,779-gallon JP-8 aircraft fuel external floating roof AST located at Bldg 351
3.	One 1,629,377-gallon JP-8 aircraft fuel external floating roof AST located at Bldg 356
4.	One 233,258-gallon JP-8 aircraft fuel internal floating roof AST located at Bldg 359
5.	One 25,000-gallon JP-8 aircraft fuel vertical fixed roof AST located at Bldg 366
6.	One 50,000 gallon diesel fuel vertical fixed roof AST located at Bldg 367
7.	One 25,000-gallon gasoline internal floating roof AST located at Bldg 368
8.	Four 10,000-gallon gasoline ASTs located at Bldg 177
9.	One 15,000-gallon gasoline UST located at Bldg 335
10.	One 1,000-gallon gasoline horizontal fixed roof AST located at Bldg 2201
11.	One
Fuels Delivery Vessel	
1.	Loading/dispensing of fuel using one 1,200 gallon fueling vehicle, vehicle ID C-300
Woodworking	
1.	Three 4-foot diameter cyclone dust collector for both non-sanderdust and sanderdust type wood located at Bldgs 247, 339, and 415
General Solvent and Material Usage	
1.	Solvent and material usage at various bldgs on base, usage managed through Environmental Management Information System (EMIS)
Surface Coating	
1.	One paint booth sized 14 feet by 15 feet, with a 19-inch by 19-inch high solid pad that has a 99% PM removal efficiency used for painting wood at Bldg 247
2.	One paint booth sized 6 feet by 9 feet, with a HC Stranded Media filter that has a 99% PM removal efficiency used for painting signs at Bldg 339, HVLP spray gun used

3.	One paint booth sized 16 feet by 26 feet, with a 6 feet by 16 feet overspray collectors filter that has a 97.14% PM removal efficiency used for air crew training devices and associated parts at Bldg 415, HVLP spray gun used
4.	Brush painting, aerosol can spray painting, rolling, or dipping at other various bldgs on base, no HVLP spray guns used
Vehicle Refinishing	
1.	One paint booth sized 25 by 13 by 9 feet, with a 20-inch by 24-inch burner filter and a 28-inch by 21-inch floor filter that have a 99% PM removal efficiency used for painting vehicles at Bldg 235, HVLP spray gun used
2.	One paint booth sized 41 by 16 by 14 feet, with a downdraft filter that has a 99.71% PM removal efficiency used for painting vehicles at Bldg 291, HVLP spray gun used
3.	One paint booth sized 44 by 16 by 16 feet, with a 20-inch by 20-inch filter that has a 98% PM removal efficiency used for painting CARC paint & epoxy polyamide primers at Bldg 1390.
Aerospace Manufacturing and Rework	
1.	One F-16 paint booth, with a 20-inch by 20-inch polyester filter that has a 99.99% PM removal efficiency and a 24 by 24 by 3-inch carbon filter that has a 99.99% VOC removal efficiency used for painting aircrafts, aircraft parts and AGE equipment at Bldg 922 East, HVLP spray gun used, Model FID Flame total Hydrocarbon Analyzer and Data Max 8000S Gas Detection System installed
2.	One F-16 paint booth, with a 24-inch by 24-inch polyester filter that has a 99.99% PM removal efficiency and a 24 by 24 by 3-inch carbon filter that has a 99.99% VOC efficiency used for painting aircrafts, aircraft parts and AGE equipment at Bldg 922 West, HVLP spray gun used, Model FID Flame total Hydrocarbon Analyzer and Data Max 8000S Gas Detection System installed
3.	One paint booth sized 20 feet by 24 feet, with a 32 element 20-inch by 25-inch filter that has a 99.10% filter efficiency used for painting aircraft support equipment, trailers, air to air missiles, fuel tanks, and wheels at Bldg 1018, HVLP spray gun used
4.	One enclosed hanger with a 72 element 20-inch by 25-inch paper and rayon filter that has a 99.10% filter efficiency used for touch up and spot painting of aircraft and support equipment at Bldg 1019, HVLP spray gun used
Spray Paint Booth Dryers (Heat input values listed are at 100% load)	
1.	One 0.972 MMBtu/hr dryer fueled by natural gas located at Bldg 235
2.	One 0.15 MMBtu/hr dryer fueled by natural gas located at Bldg 291
Paint Gun Cleaners	
1.	One 5-gallon cleaner located at Bldg 235
2.	One 5-gallon cleaner located at Bldg 291
3.	One 5-gallon cleaner located at Bldg 1018
4.	One 5-gallon cleaner located at Bldg 1019
Abrasive Blasting	
1.	One 248 by 189.5 by 144-inch plastic bead abrasion machine with twenty-four 26-inch by 11-inch cartridge filters that have a filter efficiency of 92% located at Bldg 907

Solvent Cleaning Tanks:

179	INLAND TECH	Breakthrough	COLD	20	28.3	Apr-04
235	SK Model 33	SK	COLD	32	11.4	
291	Parts Washer	Mega Mate	COLD	30	36.3	Nov-04
291	Chem Free		COLD	30	20	Nov-04

291	SK Model	SK		7	5.2	
404	ZEP DYNA BRUTE	DYNA 680		45	33.2	Nov-04
415	SK Model 33	SK	COLD	25	11.4	
482	BETTER ENG.	CALLA 296	HEATED	100	97.9	Apr-04
482	CLARIUS TECH	CALLA 296	HEATED	27.5	10.5	Apr-04
482	CLARIUS TECH	PENETONE 724	COLD	27.5	10.5	
492	BETTER ENG.	AQUA WORKS	COLD	50	101.4	Aug-98
920	MART CORP	C & G		180	149	Nov-04
930A	ZEP DYNA BRUTE	DYNA 680		45	33.2	Nov-04
930	ZEP	DYNA 680		100	40	Nov-04
931	GRAYMILLS	CARBON RM		15	14.3	Jul-99
931	GRAYMILLS	CORR. RM		15	14.3	Jul-99
931	ZEP DYNA BRUTE	DYNA 680		45	33.2	Nov-04
931	ZEP DYNA BRUTE	DYNA 680		45	33.2	Nov-04
978	GRAYMILLS	PENETONE 724	COLD	35	22.5	
983	ZEP DYNA BRUTE	DYNA 680		45	33.2	Nov-04
993	BETTER ENG.	DARACLEAN		300	56	Nov-04
999	SK Model 33	SK	COLD	17	11.4	
1018	SK Model 33	SK	COLD	17	11.4	
1022	SK Model 33	SK	COLD	16	11.4	Aug-98
1233	ZEP DYNA BRUTE	DYNA 680		36	29.3	Nov-04
1233	SK MODEL 6300	SK	COLD	7	7.5	Nov-04
1240	SK Model 33	SK	COLD	17	11.4	
1240	SK Model 33	SK	COLD	7	5.2	
2201	SK Model 33	SK	COLD	20	10.4	
Bldg.	Model	Make	Hot or	Size	Surf. Area	Date

Woodworking Equipment:

Bldg	Equipment	Manufacturer	HP Rating	Date Installed
247	Radial Arm Saw	Delta	5	
247	10" Table Saw	Delta	2	
247	10" Table Saw	Delta	1.5	
247	Joiner	Delta	1.5	
247	Planer	Delta	7	
247	Scroll Saws (2)	Delta & Hegner	.33 (ea)	
247	6" Belt/12" Disc Sander	Delta	3	
247	14" Band Saws (2)	Delta	.5 (ea)	
247	Shaper	Delta	5	
247	10" Compound Mitre Saw	Milwaukee	0.5	Installed Nov 01

247	Hollow Chisel Mortiser	Delta	0.5	Installed Nov 01
247	36" Sander	Timesavers 100	20	
247	Inverted Router	CR Onsrud	5	Installed Nov 01
247	Double Mitre Cutoff Saw	CTD	3	Installed Nov 01
247	Panel Saw	Milwaukee	2.5	Installed Nov 01
247	10" Drill Press (2)	Delta & Rockwell	1.0 (ea)	Installed Nov 01
318	6" Belt Sander	Dayton	1	
318	15" Drill Press	Westward	0.75	
318	20" Band saw	Delta	5	
318	6" Bench Grinder	Craftsman	0.33	
318	Miter Saw	PorterCable	0.5	
318	Radial Arm Saw	Delta	2	
318	Chop Saw	Craftsman	3.5	
318	15" Planer	Dayton	7	
318	10" Table Saw	Dayton	5	Installed Nov 01
318	Joiner	Powermatic	0.75	Installed Nov 01
339	Radial Saw	Dewalt	5	
339	Joiner	Delta	1.5	
339	Planer (Surfacer)	General	10	
339	10" Table Saw	Rockwell	5	
339	Shop Smith Mark V	Shop Smith		Installed Nov 01
339	Panel Saw	Milwaukee	3	Installed Nov 01
339	10" Tilting Arbor Saw	Delta	3	Installed Nov 01
339	18" Planer	Powermatic	5	Installed Nov 01
339	24" Planer	Invieta	10	Installed Oct 03
339	Miter Saw 10"	PorterCable	0.5	Installed Nov 01
339	24" Band Saw	Delta	2	Installed Nov 01
339	17" Drill Press	Wilton	1.5	Installed Nov 01
339	Table Router	Jet	2	Installed Nov 01
339	6" Belt Sander	Dayton	2	Installed Nov 01
339	24" Disc Sander	Powermatic	3	Installed Nov 01
339	Drum Sander	Jet	1	Installed Nov 01
339	Scroll Saw	Scrollmate	1	Installed Nov 01
415	Joiner	Yates	5	
415	Planer	Northfield	7.5	
415	Band Saw	Moake	5	
415	Sander	Rockwell	7.5	
415	Table Saw	Rockwell	3	
415	Scroll Saw	Rockwell	1	Installed Nov 01
415	30" Disc Sander	Max Universal	7.5	Installed Nov 01
948	Radial Arm Saw	Rockwell	5	

948	Table Saw	Rockwell	1.5	
948	20" Band Saw	Rockwell	3	
948	Panel Saw	Milwaukee	2.5	Installed Nov 01
948	20" Drill press	Rockwell	1.5	Installed Nov 01

APPENDIX B
Permit Shield

Identified below are all federal, state and local air pollution control requirements applicable to Luke AFB at the time the permit is issued. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance included in the Appendix O "Permit Shield" of this permit.

For each part, subpart, section and subsection reference listed, all subsequent sections are assumed applicable. All other subparts or sections not listed are not applicable.

COUNTY REQUIREMENTS

Maricopa County

Air Pollution Control Regulations

Regulation I General Provisions

Rule 100		General Provisions and Definitions (3/7/01 revision)
	§104	Circumvention
	§105	Right of Inspection of Premises
	§106	Right of Inspection of Records
	§200	Definitions
	§301	Air Pollution Prohibited
	§501	Reporting Requirements
	§502	Data Reporting
	§503	Emission Statements Required as Stated in the Act
	§504	Retention of Records
	§505	Annual Emissions Inventory Report

Rule 130		Emergency Provisions (7/26/02 revision)
	§200	Definitions
Rule 130		Emergency Provisions (7/26/02 revision)
	§400	Administrative Requirements

Rule 140		Excess Emissions (7/26/00 revision)
	§400	Administrative Requirements
	§500	Monitoring and Records

Regulation II Permits and Fee

Rule 200		Permit Requirements (5/20/98 revision)
	§301	Permits Required
	§302	Title V Permit
	§305	Earth Moving Permit
	§306	Permit to Burn
	§309	Permit Conditions
	§308	Application Standards
	§310	Prohibition – Permit Modification
	§311	Permit Posting Required
	§404	Permit Transfers
	§408	Testing Procedure
	§409	Fees
	§410	Portable Sources

Rule 210		Title V Permit Provisions (2/7/01 revision)
	§200	Definitions
	§301	Permit Application Processing Procedures
	§302	Permit Contents
	§305	Compliance Plan
	§400	Administrative Requirements
	§401	Fees
	§402	Permit Term
	§403	Source Changes Allowed without Permit Revisions
	§404	Administrative Permit Revisions
	§405	Minor Permit Revisions

Rule 210		Title V Permit Provisions (2/7/01 revision)
	§406	Significant Permit Revisions
	§407	Permit Shields

Rule 270		Performance Tests (11/15/93 revision)
	§300	Standards
	§301	Performance Tests Required (approved test methods)
	§301.1	Applicable Procedures and Testing Methods
	§301.2	Opacity determined by Reference Method 9 of the AZ Testing Manual
	§400	Administrative Requirements
	§401	Performance Tests Required
	§402	Testing Criteria
	§403	Testing Conditions
	§404	Notice of Testing
	§405	Testing Facilities Provided
	§406	Minimum Testing Required
	§407	Compliance with the Emissions Limits
	§408	Additional Testing

Rule 280		Fees
	§301	Title V Permit Fees
	§304	Calculation of Emission Fees
	§307	Gasoline Delivery Vessel Fee
	§308	Permit To Burn Fee
	§309	Earthmoving Permit Fee
	§310	Asbestos Notification and Plan Review Filing Fee
	§401	Payment of Fees

Regulation III Control of Air Contaminants

Rule 300	Visible Emissions (2/7/01 revision)

Rule 300		Visible Emissions (2/7/01 revision)
	§301	Limitations – Opacity/General: Opacity ≤ 20%
	§302	Exceptions
	§501	Compliance Determination – Opacity
	§502	Compliance Determination – Opacity of Visible Emissions from Intermittent Sources

Rule 310		Fugitive Dust Sources (02/16/00 revision)
	§200	Definitions
	§301	Opacity Limitation for Fugitive Dust Sources
	§302	Stabilization Requirements for Fugitive Dust Sources
	§303	Dust Control Plan Required
	§304	Elements of a Dust Control Plan
	§305	Dust Control Plan Revisions
	§306	Control Measures
	§307	Project Information Sign
	§308	Work Practices
	§401	Dust Control Plan Posting
	§402	Compliance Schedule
	§501	Compliance Determinations
	§502	Recordkeeping
	§503	Records Retention

Rule 311		Particulate Matter from Process Industries (08/02/93 revision)
	§200	Definitions
	§306	Operation and Maintenance Plan Required
	§502	Recordkeeping and Reporting
	§503	Record Retention

Rule 312		Abrasive Blasting (07/13/88 revision)
	§200	Definitions

	§301	Limitations – 20 Percent Opacity
	§302	Control Required
	§401	Visible Emission Evaluation Techniques

Rule 314		Open Outdoor Fires (12/19/01 revision)
	§301	Prohibition - Open Outdoor Fires
	§302	Burn Permit
	§303	Exemptions
	§401	Fees Required
	§402	Burn Permit Application
	§403	Burn Permit Conditions
	§405	Burn Permit Term

Rule 315		Spray Coating Operations (11/17/99 revision)
	§301	Controls Required
	§302	Exemptions

Rule 320		Odors and Gaseous Air Contaminants (7/13/88 revision)
	§300	Standards
	§302	Material Containment Required
	§303	Stack Height

Rule 330		Volatile Organic Compounds (6/16/96 revision)
	§200	Definitions
	§302	Limitations – Non-Complying Solvents
	§305	Equipment Cleanup
	§306	Containment and Disposal
	§307	Exemptions
	§502	Determination of Compliance
	§503	Recordkeeping and Reporting

Rule 331		Solvent Cleaning (04/07/99 revision)
	§200	Definitions
	§301	Solvent Handling Requirements
	§302	Equipment Requirements for All Cleaning Machines
	§303	Specific Operating & Signage Requirements for Cleaning Machines
	§304	Solvent Specifications For Non-Vapor Cleaning and Degreasing
	§305	Non-Vapor Batch Cleaning Machines
	§306	Non-Vapor Inline Cleaning
	§308	Exemptions
	§501	Recordkeeping and Reporting

Rule 335		Architectural Coatings (07/13/88 adopted)
	§200	Definitions
	§305	Limits – Specialty Coatings

Rule 336		Surface Coating Operations (04/07/99 revision)
	§200	Definitions
	§301	Surface Coatings
	§302	Application Methods for Surface Coatings
	§303	Cleanup of Application Equipment
	§304	Handling and Disposal of VOC
	§305	Exemptions
	§501	Recordkeeping and Reporting

Rule 345		Vehicle and Mobile Equipment Coating (04/21/99 revision)
	§200	Definitions
	§301	Limitations: VOC Content of Refinish Coatings for Light Duty Vehicles
	§302	Refinishing Heavy Duty Trucks and Truck-Trailers
	§303	Coating New Surfaces and Refinishing Heavy Vehicles
	§304	Mixing Requirements
	§305	Surface Preparation and Surface Cleaning Fluids

Rule 345		Vehicle and Mobile Equipment Coating (04/21/99 revision)
	§306	Maintenance
	§307	Paint Gun Requirements and Limits
	§309	Cleanup and Cleaning Supply and Application Equipment
	§310	Gun Cleaning Machines
	§311	Storage and Disposal of VOC and VOC-Containing Material
	§312	Exemptions
	§501	Recordkeeping and Reporting
	§502	Compliance Determination

Rule 348		Aerospace Manufacturing and Rework Operations (04/07/99 adopted)
	§200	Definitions
	§301	Limitations: VOC Emissions
	§302	Emission Control System
	§303	Application Equipment
	§305	Solvent Cleaning
	§306	Spray Gun Cleaning
	§307	VOC Containment and Disposal
	§308	Exemptions
	§501	Recordkeeping and Reporting
	§502	Compliance Determination

Rule 350		Storage of Organic Liquids at Bulk Plants and Terminals (04/06/92 revised)
	§200	Definitions
	§301	All Storage Tanks Greater than 250 Gallons
	§302	Gasoline Storage Tanks Between 250 and 40,000 Gallons
	§306	External Floating Roof Tanks
	§307	Internal Floating Roof Tanks
	§308	Vapor Collection/Processing System
	§309	Additional Requirements
	§310	Exemptions

Rule 350		Storage of Organic Liquids at Bulk Plants and Terminals (04/06/92 revised)
	§401	Annual Inspections of External Floating Roof Tanks
	§402	Annual Inspections of Internal Floating Roof Tanks
	§403	Five-Year Circumference Inspections
	§404	Semi-Annual Inspections By Owner or Operator
	§501	Vapor Pressure Records
	§502	Compliance Determination – Test Methods

Rule 351		Loading of Organic Liquids (02/15/95 revised)
	§200	Definitions
	§301	General Loading Requirements for Loading Facilities
	§302	Operating Requirements for Vapor Loss Control Devices
	§303	Repair and Retesting Equipment
	§304	Equipment Maintenance and Operating Practices
	§305	Exemptions
	§401	Equipment Leaks
	§501	Leak Detection
	§502	Compliance Inspections
	§503	Records Retention
	§504	Compliance Determination – Test Methods

Rule 352		Gasoline Delivery Vessel Testing and Use (05/05/99 revised)
	§200	Definitions
	§301	Prevent Leaks and Spills
	§302	Gasoline Delivery Vessel Leak Test Required
	§303	Display a Valid Decal
	§304	Purging Prohibited
	§305	Exemptions
	§401	Testing
	§501	Recordkeeping and Reporting Requirements
	§502	Monitoring for Leaks

Rule 352		Gasoline Delivery Vessel Testing and Use (05/05/99 revised)
	§503	Compliance Determinations
	§504	Test Methods

Rule 353		Gasoline in Stationary Dispensing Storage Tanks (06/16/99 revised)
	§200	Definitions
	§301	Basic Tank Integrity
	§302	Fill Pipe Requirements
	§303	Vapor Recovery System
	§304	Equipment Maintenance and Use Required
	§305	Exemptions
	§501	Compliance Inspections
	§502	Recordkeeping
	§503	Compliance Determination
	§504	Test Methods

Rule 370		Federal Hazardous Air Pollutant Program (3/1/00 revision)
	§200	Definitions
	§301.8	Subpart M National Emission Standard for Asbestos

Rule 600		Emergency Episodes
	§302	Control Actions

FEDERAL REQUIREMENTS

NESHAP Program (40 CFR Part 61)

Subpart M - National Emission Standard for Asbestos	
§61.145(a)(2)	Standard for demolition and renovation
§61.145(b)(1), (2), (3)(i) and (3)(iv), (4)(i) through (vii) and (4)(ix) and (4)(xvi)	Notification requirements when demolition involves less than 80 linear meters on pipes and less than 15 square meters on other surfaces and less than one cubic meter of regulated asbestos containing material (RACM) from other facility components where the length or area could not be measured previously or there is no asbestos.

Accidental Release Program (40 CFR Part 68)

40 CFR Part 68 Subpart F- Regulated Substances for Accidental Release Prevention	
§ 68.115	Threshold Determinations of general duty to identify, prevent and minimize the consequences of accidental releases of listed and other extremely hazardous substances.

Protection of Stratospheric Ozone (40 CFR Part 82)

Subpart B - Servicing of Motor Vehicle Air Conditioners	
§82.42(b)(3)	No person may sell, distribute, or offer for sale or distribution any Class I or Class II substance that is suitable for use as a refrigerant in motor vehicle air-conditioner in a container that contains less than 20 pounds of such refrigerant to any person unless that person is properly trained and certified, or purchases the containers for resale purposes only, and so certifies to the seller.

Subpart D - Procurement of Class I and Class II substances	
§82.156	Federal departments, agencies, and instrumentalities to adopt procurement regulations that conform to the policies and requirements of Title VI of the CAA and that maximize the substitution of safe alternatives in federal procurement

Subpart F- Recycling and Emissions Reduction

§82.156	Required Practices
§82.158	Standards
§82.161	Technician Certification

Federal Requirements

MARICOPA COUNTY STATE IMPLEMENTATION PLAN

(AS OF 12/31/99)

Regulation I General Provisions

Rule 2	Definitions

Rule 3	Air Pollution Prohibited

Regulation II Permits

Rule 220	Permits To Operate
200	Definitions
301	Permit Requirements
302	Standards for Granting Permits
401	Application Procedures for Permits to Operate
402	Testing Required
403	Additional Information or Modeling Required
404	Procedures for Submission of Control Plan Demonstrating RACT
406	Permit Provisions
407	Inspection of Equipment
408	Permit Renewal
409	Annual Renewal Date
410	Fees Required

Rule 27	Performance Tests
§§ A, B	

Regulation III Control of Air Contaminants

Rule 30	Visible Emissions

§§ A, B

Rule 32	Odors and Gaseous Emissions
§§ A, C, D, F	

Rule 33.1	Storage and Handling of Petroleum Products Unless Daybreak Couplings are Used
§§ A, B	

Rule 33.2	Delivery Vessels
§§ A, B, C, D	

Rule 33.3	Loading into Stationary Storage Tanks
§§ A, B, C	

Rule 34	Organic Solvents – Volatile Organic Compounds (VOC)
§§ A, B, C, E, F, G, H, I, J, K	

Rule 310		Fugitive Dust Sources (12/19/94)
	§200	Definitions
	§301	Limitation - Opacity
	§302	Dust Generating Operations – Permits Required
	§303	Control Plan Required With Permit Application
	§304	Control Plan Revision
	§305	Vehicle Use in Open Areas and Vacant Lots
	§306	Unpaved Parking Areas/Staging Areas
	§307	Unpaved Haul/Access Roads
	§308	Disturbed Surface Areas
	§309	Vacant Areas
	§310	Material Handling

Rule 310	Fugitive Dust Sources (12/19/94)
§311	Material Transport
§312	Roadways, Streets and Alleys
§313	Erosion, Sedimentation and Dispositions of Bulk Material onto Paved Surfaces
§401	Information Required to be in a Control Plan
§402	Permit and Control Plan Posting Required
§501	Opacity Determination
§502	Wind Speed Determination
§503	Recordkeeping
§504	Records Retention

Rule 331	Solvent Cleaning (8/10/92)
§200	Definitions
§301	General Equipment Requirements
§302	Cold Degreasing/Cleaning
§303	Batch-Loaded Vapor Degreasing
§304	Non-Vapor Conveyorized Degreasing
§305	Vapor Conveyorized Cleaning
§306	General Operating Requirements
§307	Exemptions
§501	Solvent Records Required
§502	Compliance Determination – Test Methods

Rule 335	Architectural Coatings (07/13/88)
§200	Definitions
§305	Limits – Specialty Coatings

Rule 350	Storage of Organic Liquids at Bulk Plants and Terminals (04/06/92 revised)
§200	Definitions
§301	All Storage Tanks Greater than 250 Gallons

Rule 350		Storage of Organic Liquids at Bulk Plants and Terminals (04/06/92 revised)
	§302	Gasoline Storage Tanks Between 250 and 40,000 Gallons
	§306	External Floating Roof Tanks
	§307	Internal Floating Roof Tanks
	§308	Vapor Collection/Processing System
	§309	Additional Requirements
	§310	Exemptions
	§401	Annual Inspections of External Floating Roof Tanks
	§402	Annual Inspections of Internal Floating Roof Tanks
	§403	Five-Year Circumference Inspections
	§404	Semi-Annual Inspections By Owner or Operator
	§501	Vapor Pressure Records
	§502	Compliance Determination – Test Methods

Rule 351		Loading of Organic Liquids (04/06/92 revised)
	§200	Definitions
	§301	General Loading Requirements for Loading Facilities
	§302	Operating Requirements for Vapor Loss Control Devices
	§303	Repair and Retesting Equipment
	§304	Equipment Maintenance and Operating Practices
	§305	Exemptions
	§401	Testing – Leak Detection
	§501	Leak Detection – Test Procedure
	§502	Compliance Inspections
	§503	Records Retention
	§504	Compliance Determination – Test Methods

Rule 352		Gasoline Delivery Vessel Testing and Use (11/16/92 revised)
	§200	Definitions
	§301	Vapor Recovery Required

Rule 352		Gasoline Delivery Vessel Testing and Use (11/16/92 revised)
	§302	Gasoline Delivery Vessel Leak Test Required
	§303	Purging Prohibited
	§304	Exemptions
	§401	Testing
	§501	Recordkeeping and Reporting Requirements
	§502	Monitoring for Leaks
	§503	Compliance Determinations – Test Methods

Rule 353		Gasoline in Stationary Dispensing Storage Tanks (04/06/92 revised)
	§200	Definitions
	§301	Vapor Loss Control Measures Required
	§302	Equipment Maintenance and Use Required
	§303	Exemptions
	§401	Use of Stage I Equipment
	§501	Compliance Inspections
	§502	Recordkeeping
	§503	Burden of Proof
	§504	Compliance Determination - Test Methods

Rule IV Production of Records: Monitoring, Testing and Sampling Facilities

Rule 40	Recordkeeping and Reporting
§§ A, B, C, D	

Rule 41	Monitoring
§§ A	
Rule 42	Testing and Sampling
§§ A, B	

Rule 43	Right of Inspection

Regulation V Unlawful Open Burning

Rule 50	Open Outdoor Fires

APPENDIX C
Insignificant Equipment List

Insignificant Activity or Source	Description	Basis for Insignificant Designation
Welding and soldering	Welding and soldering activities occur at several base facilities for repair of parts.	Brazing, welding, and soldering equipment is defined to be insignificant Does not emit more than 5 tons per year.
Abrasive blasting	Abrasive blasting where conducted in enclosed "glove boxes" as required by MCAPCR Rule 312 provides for high particulate matter collection efficiency. In addition, any similar operations exhausted inside the facility building.	Negligible emissions of regulated air pollutants. The emissions are not emitted into the ambient air.
Battery repair shop	A ventilated room where batteries are stored while they are recharging (Both aircraft and vehicle batteries are recharged.)	Negligible emissions of regulated air pollutants
Fuels lab	Physical and chemical analysis of fuels	Laboratory equipment used exclusively for chemical and physical analyses, with VOC emissions not exceeding 3 pounds in a single day
WasteWater Treatment Facility Lab	Physical and chemical analysis of wastewater	Laboratory equipment used exclusively for chemical and physical analyses, with VOC emissions not exceeding 3 pounds in a single day
Aerosol Surface coatings	Small-scale and infrequent surface coating operations using hand-held aerosol cans	Emissions would not exceed 3 pounds during any day
Internal Combustion	Internal combustion engines located throughout the base with a manufacturer's maximum continuous rating of 50 hp or less or a maximum accumulative rating of 250 hp or less for engines used in the same process at one source	Internal combustion equipment rated at 50 bhp or less may be deemed insignificant
Gasoline storage	Gasoline storage tanks located throughout the base with a capacity less than or equal	Stationary storage tanks with a capacity of 250 gallons or less

Insignificant Activity or Source	Description	Basis for Insignificant Designation
	to 250 gallons	used for storing organic liquids may be deemed insignificant.
JP-8/Diesel fuel storage	Those aboveground and underground tanks located at the base with a capacity of less than 12,500 gallons that store JP-8 or diesel fuel with a true vapor pressure less than 1.5 psia.	Stationary storage tanks used for storing JP-8 and Diesel, with a capacity less than 12,500 and a true vapor pressure of 1.5 psia or less are deemed insignificant at Luke AFB.
Food preparation	Equipment throughout the base, excluding boilers, used for the preparation of food for human consumption (This includes all emissions associated with this activity.)	This equipment is used in eating establishments for the purpose of preparing food for human consumption
Fuels management	Piping and storage systems for natural gas, propane, and LPG	All natural gas storage tanks
Safety devices	Safety equipment, such as fire extinguishers	Negligible fugitive emissions and infrequent use
Sampling	Soil, soil gas, and groundwater sampling	Negligible fugitive emissions. Required for environmental compliance
Waste disposal	Processing of near empty containers (usable product already removed) by rinsing, crushing, shredding, compacting, etc., hazardous waste accumulation sites and satellite points, garbage handling	Negligible emissions for handling of wastes
Vehicle Maintenance	General vehicle and appliance maintenance in small shops at several locations including freon recovery equipment	Negligible emissions
Material storage	Storage cabinets for flammable products throughout the base	Negligible fugitive emissions from sealed containers

Insignificant Activity or Source	Description	Basis for Insignificant Designation
Metal shop/facilities performing metal work/hobby shop using hand held equipment	Metal, ceramic, leather, etc. repair, rework, and production of components	Equipment used for buffing, carving, cutting, drilling, surface grinding, machining, planning, routing, sanding, sawing, shredding, or turning of ceramic artwork, precision parts, leather, metals, plastics, rubber, fiberboard, masonry, carbon, graphite or glass, may be deemed insignificant
Shop vacuums attached to woodworking equipment	Woodworking equipment with shop vacuums attached to collect sander dust listed in **Table 4-5**.	All equipment operated within a building, attached to the woodworking equipment. No emissions are emitted to the ambient air.

APPENDIX D

Technical Support Document
Title V Permit Number V97-017
Luke Air Force Base
June 2004

1.0 PURPOSE OF DOCUMENT

The purpose of this Technical Support Document (TSD) is to document the technical and regulatory evaluation of an application for a Title V Air Quality Operating Permit, submitted by Luke Air Force Base (LAFB) to the Maricopa County Environmental Services Department (MCESD), Air Quality Division. Specifically, the methods used by LAFB to identify regulated equipment and operations, estimate maximum potential air pollutant emission rates from each emissions unit, identify applicable regulatory requirements and identify the methodology that LAFB will use to comply with each identified requirement were all evaluated by MCESD and their contractor, Kleinfelder, Inc. (Kleinfelder), as described, herein. Based on the information submitted by LAFB and the evaluation conducted, MCESD has determined that the continued operation of the facility will not cause or contribute to a violation of any federal or state ambient air quality standard or ambient air quality guideline.

2.0 APPLICANT

56th Fighter Wing Luke Air Force Base
56 CES/CEVC; 13970 West Lightening Street
Luke AFB, AZ 85309-1149

3.0 SOURCE LOCATION

LAFB is a military training installation encompassing approximately 3,862 acres of land located near Phoenix, Maricopa County, Arizona. LAFB is located in Section 4/Township 2 North/Range 1 West at 32° 30’ 00’’ West longitude and 112° 22’ 30” North latitude. The site elevation is 1,100 feet above mean sea level (msl). LAFB employs approximately 7,670 military and non-military personnel. Operations at LAFB include support activities for housing and feeding personnel, and maintenance and support of military equipment and operations. LAFB is owned and operated by the

United State Department of Defence. The base is classified as Standard Industrial Classification (SIC Code) 9711, National Security.

4.0 DISCUSSION OF SOURCE STATUS

The MCESD has been delegated primary responsibility for the Title V Permit program in the County, and therefore, LAFB comes under the jurisdiction of MCESD. The requirements for obtaining Title V permits in Maricopa County are provided in Maricopa County Air Pollution Control Regulation II, Rule 210. Pursuant to the federal Title V permitting program, major sources of criteria pollutants must obtain an operating permit. Major sources are defined as any installation which, in the aggregate, emit 100 tons per year (TPY) or more of any criteria pollutant, 10 TPY of more of any individual hazardous air pollutant (HAP) or 25 TPY or more of any combination of HAPs. The criteria pollutants include carbon monoxide (CO), nitrogen oxides (NO_x), sulphur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}), volatile organic compounds (VOC) and lead (Pb). The major source thresholds for criteria pollutants are lower than 100 TPY in certain non-attainment areas, as further described below. As evidenced herein and within the application submitted by LAFB, the facility is a major source of NO_x and VOC, and therefore must obtain a Title V permit. LAFB is not a major source for other criteria pollutant or for any HAPs.

With respect to the National Ambient Air Quality Standards (NAAQS), portions of Maricopa County (including the location of LAFB) are designated as serious nonattainment for PM_{10}, CO, and Ozone (O_3). The major source threshold for NO_x and VOC in a serious ozone non-attainment area is 50 TPY. The major source threshold for PM_{10} in a serious PM_{10} non-attainment area is 70 TPY. The major source threshold for CO in a serious CO non-attainment area remain unchanged at 100 TPY. Section 182(f) of the Clean Air Act (CAA), revised in 1990, allows ozone non-attainment areas, where ozone concentrations are relatively unaffected by NO_x emission levels, to be exempted from NO_x Reasonably Available Control Technology (RACT) and offset requirements. Maricopa County has not implemented Section 182(f) for New Source Review purposes; therefore for O_3 NAAQS purposes, the MCESD regulates both of the precursor pollutants NO_x and VOC. All areas of Maricopa County are designated as attainment or unclassified for SO_2, NO_2, and Pb.

5.0 APPLICATION REVIEW

LAFB has applied for a Title V Air Quality Permit from the MCESD, Air Quality Division, pursuant to the requirements of Rule 210. Sources of air pollutants at LAFB included external combustion equipment used for heating base facilities; internal combustion equipment used for emergency power and soil remediation; use of VOC-containing materials such as solvents, paints, and adhesives for maintenance of vehicles,

aircraft and equipment; woodworking facilities for construction of signs and furniture; surface coating operations; and gasoline, diesel, and JP-8 storage tanks used primarily for fueling motor vehicles, aircraft, auxiliary ground equipment (AGE) and miscellaneous facility equipment.

In general, the permit application review and approval process is as follows:

1. An air quality permit application is submitted to MCESD (applicant may or may not request accelerated application review).
2. The MCESD (or their contractor) conduct an engineering review of the application for completeness and technical accuracy.
3. The MCESD (or their contractor) conduct an evaluation of applicable requirements (federal, state and local rules, SIP provisions and previous permit conditions).
4. The MCESD (or their contractor) prepare a draft permit and Technical Support Documents, which are provided to the applicant.
5. The terms and conditions of permit are finalized by MCESD and applicant; (the applicant cannot negotiate which applicable requirements it will comply with – rather, the purpose of this step is to ensure that the draft permit accurately and thoroughly addresses the air polluting equipment and operations at the source facility).
6. The permit is proposed by MCESD by posting a public notice and announcing a 30-day public comment period.
7. If a public hearing is requested during the comment period, it will be scheduled
8. After the public hearing (if any), the draft permit will be forwarded to the U.S. Environmental Protection Agency (EPA) for their review. The EPA can veto the permit, for sufficient cause, within 45 days following their receipt of the draft.
9. After EPA approval of the draft, the air quality permit will be issued by the MCESD for a term of 5 years.

LAFB initially filed the Title V Air Quality Permit Application for the base in 1997. Kleinfelder was contracted by MCESD to perform a review of the application for completeness and technical accuracy, and to prepare a draft permit and this TSD. From February 2003 to June 2003, Kleinfelder, MCESD, and LAFB discussed technical and regulatory issues and the completeness of the Application; during that time period, LAFB submitted supplemental information for the Application to reflect changes and corrections to the original Application. The supplemental information included revisions to various sections of the original Application including process descriptions, potential to emit calculations, the compliance plan, the permit shield and supplemental information for air pollutant emitting equipment (including emission factor source references and control equipment Operation and Maintenance Plans). The MCESD anticipates that the permit will be finalized and that they will post public notice (commencing the 30-day public comment period) in December, 2003. If no public hearing is requested, the draft permit will likely be submitted by MCESD to the EPA in January, 2004 and (if approved

by the EPA) issued to LAFB in March, 2004. If a public hearing is requested and held, issuance of the permit will occur after that date.

6.0 FACILITY DESCRIPTION

The LAFB equipment that have the potential to emit criteria air pollutants (at any level above "insignificant", as defined in Maricopa County Rule 100) are listed in Table 6-1 of this TSD, below. Insignificant equipment are listed in Section 4 of the Application. Emission sources at LAFB include fuel burning equipment, fuel storage tanks, fuel dispensing and loading, soil remediation equipment, cold bath solvent degreasing, solvent and material use, surface coating operations, woodworking, jet engine testing, fuel tank purging, and other maintenance and support activities. The equipment is listed to correct for any inconsistencies in the Application tables or text. The equipment specifications are assumed correct based on Application revisions and verbal confirmations provided by Like AFB. The final Permit is based on the equipment listed in Table 6-1, below, being present at the base.

Table 6-1
LAFB Air Pollutant Emitting Equipment

Emergency Generator Units	
1.	Five 60 kW diesel-powered electric generators located at Buildings (Bldgs) 11, 284, 901, 1034, and 1074
2.	Four 100 kW diesel-powered electric generators located at Bldgs 176, 316, 343, 793
3.	Ten 15 kW diesel-powered electric generators located at Bldgs 179, 910, 1002, 1047, 1056, 1057, 1086, 1380, 2104, and 2105
5.	Two 125 kW diesel-powered electric generators located at Bldgs 310 and 979
7.	Two 350 kW diesel-powered electric generators located at Bldgs 321 and 988
8.	Two 30 kW diesel-powered electric generators located at Bldgs 328 and 1049
10.	One 45 kW diesel-powered electric generator located at Bldg 450
11.	Two 250 kW diesel-powered electric generators located at Bldgs 453 and 952
13.	Two 200 kW diesel-powered electric generators located at Bldgs 815 and 1387
16.	Two 50 kW diesel-powered electric generators located at Bldgs 927 and 1040
18.	Two 20 kW diesel-powered electric generators located at Bldgs 961 and 1365
22.	One 400 kW diesel-powered electric generator located at Bldg 1013
31.	Two 800 kW diesel-powered electric generators located at Bldg 1132
32.	One 175 kW diesel-powered electric generator located at Bldg 1217
33.	One 450 kW diesel-powered electric generator located at Bldg 1239
35.	One 80 kW diesel-powered electric generator located at Bldg 1379
38.	One 25 kW diesel-powered electric generator located at Bldg 1550
41.	Four 5 kW diesel-powered electric generators located at ADCC, DCC, SRC, and Supply
45.	One 20 kW natural gas-powered electric generator located at Bldg 470
46.	One 50 kW natural gas-powered electric generator located at Bldg 969
Peak-Shaving Generator Unit	
1.	One 1250 kW natural gas-powered peak-shaving generator located at Bldg 1158
Small Turbine Engine Testing	
1.	JP-8 fuel-powered small aircraft turbine engines, engine type F100-PW-220/220E, testing at Bldgs 1006, 1012, and 1016
Soil Vapor Extraction (SVE) Units	

1.	One Ford 460 CID 0.419 MMBtu/hr internal combustion engine powered by propane and used to extract and combust diesel and JP-8 vapors at a 99% VOC destruction efficiency, located at Bldg 353
Boilers (Heat input values listed are at 100% load)	
1.	Three 0.3 MMBtu/hr boilers fueled by natural gas located at Bldgs 25, 247, and 988
2.	One 1.74 MMBtu/hr boiler fueled by natural gas located at Bldg 26
3.	Two 0.525 MMBtu/hr boilers fueled by natural gas located at Bldg 122 and 176
4.	One 1.75 MMBtu/hr boiler fueled by natural gas located at Bldg 133
5.	One 0.659 MMBtu/hr boiler fueled by natural gas located at Bldg 156
6.	One 2.16 MMBtu/hr boiler fueled by natural gas located at Bldg 161
7.	Three 0.55 MMBtu/hr boilers fueled by natural gas located at Bldgs 219, 569, and 1515
8.	Two 0.972 MMBtu/hr boilers fueled by natural gas located at Bldg 235
9.	One 0.015 MMBtu/hr boiler fueled by natural gas located at Bldg 291
10.	Three 0.15 MMBtu/hr boilers fueled by natural gas located at Bldgs 338 and 1236 (2)
11.	Two 0.76 MMBtu/hr boilers fueled by natural gas located at Bldgs 339 and 485
12.	Three 0.4 MMBtu/hr boilers fueled by natural gas located at Bldgs 343, 931, and 936
13.	Three 0.42 MMBtu/hr boilers fueled by natural gas located at Bldgs 400, 547, and 904
14.	One 0.16 MMBtu/hr boiler fueled by natural gas located at Bldg 404
15.	Two 1.056 MMBtu/hr boilers fueled by natural gas located at Bldgs 408 and 431
16.	Four 0.6 MMBtu/hr boilers fueled by natural gas located at Bldgs 415, 581, 610, and 915
17.	Five 0.25 MMBtu/hr boilers fueled by natural gas located at Bldgs 416, 450, 453, and 905 (2)
18.	One 0.49 MMBtu/hr boiler fueled by natural gas located at Bldg 417
19.	Five 0.35 MMBtu/hr boilers fueled by natural gas located at Bldgs 445, 470, 616A, 688, and 938
20.	Two 0.216 MMBtu/hr boilers fueled by natural gas located at Bldgs 447 and 461
21.	One 0.489 MMBtu/hr boiler fueled by natural gas located at Bldg 452
22.	Two 0.56 MMBtu/hr boilers fueled by natural gas located at Bldgs 500 and 1525
23.	Two 0.665 MMBtu/hr boilers fueled by natural gas located at Bldgs 528 and 530
24.	One 0.825 MMBtu/hr boiler fueled by natural gas located at Bldg 533
25.	Ten 0.5 MMBtu/hr boilers fueled by natural gas located at Bldgs 542, 583, 617A, 983 (2), 985 (4), and 2201
26.	One 2.4 MMBtu/hr boiler fueled by natural gas located at Bldg 545
27.	Two 0.9 MMBtu/hr boilers fueled by natural gas located at Bldgs 546 and 993
28.	Four 0.75 MMBtu/hr boilers fueled by natural gas located at Bldgs 587, 640, 723, and 962
29.	Two 1.375 MMBtu/hr boilers fueled by natural gas located at Bldgs 616B and 930
30.	Two 1.2 MMBtu/hr boilers fueled by natural gas located at Bldgs 617B and 668
31.	One 4.5 MMBtu/hr boiler fueled by natural gas located at Bldg 635A
32.	Two 1.05 MMBtu/hr boilers fueled by natural gas located at Bldgs 635B and 750
33.	One 2.86 MMBtu/hr boiler fueled by natural gas located at Bldg 636A
34.	One 0.85 MMBtu/hr boiler fueled by natural gas located at Bldg 636B
35.	One 2.89 MMBtu/hr boiler fueled by natural gas located at Bldg 637
36.	Two 0.36 MMBtu/hr boilers fueled by natural gas located at Bldgs 663 and 673
37.	Four 1.5 MMBtu/hr boilers fueled by natural gas located at Bldgs 687, 700, 961, and 1022
38.	One 0.125 MMBtu/hr boiler fueled by natural gas located at Bldg 799

39.	One 3.5 MMBtu/hr boiler fueled by natural gas located at Bldg 820
40.	Two 1.0 MMBtu/hr boilers fueled by natural gas located at Bldgs 840 and 1143
41.	One 0.09 MMBtu/hr boiler fueled by natural gas located at Bldg 859
42.	Two 1.25 MMBtu/hr boilers fueled by natural gas located at Bldgs 913 and 914
43.	One 0.395 MMBtu/hr boiler fueled by natural gas located at Bldg 917
44.	Four 4.0 MMBtu/hr boilers fueled by natural gas located at Bldgs 922 (2) and 1540 (2)
45.	One 0.675 MMBtu/hr boiler fueled by natural gas located at Bldg 927
46.	Two 0.2 MMBtu/hr boilers fueled by natural gas located at Bldgs 927 and 1365
47.	One 0.26 MMBtu/hr boiler fueled by natural gas located at Bldg 928
48.	Two 0.63 MMBtu/hr boilers fueled by natural gas located at Bldgs 930A and 1019
49.	One 0.565 MMBtu/hr boiler fueled by natural gas located at Bldg 931
50.	One 0.7 MMBtu/hr boiler fueled by natural gas located at Bldg 937
51.	One 0.355 MMBtu/hr boiler fueled by natural gas located at Bldg 942
52.	One 1.795 MMBtu/hr boiler fueled by natural gas located at Bldg 945
53.	One 0.78 MMBtu/hr boiler fueled by natural gas located at Bldg 959
54.	One 0.325 MMBtu/hr boiler fueled by natural gas located at Bldg 997
55.	One 0.45 MMBtu/hr boiler fueled by natural gas located at Bldg 1018
56.	One 1.67 MMBtu/hr boiler fueled by natural gas located at Bldg 1019
57.	Three 3.36 MMBtu/hr boilers fueled by natural gas located at Bldg 1132
58.	One 2.97 MMBtu/hr boiler fueled by natural gas located at Bldg 1150
59.	One 0.136 MMBtu/hr boiler fueled by natural gas located at Bldg 1236
Chillers (Heat input values listed are at 100% load)	
1.	One 0.42 MMBtu/hr chiller fueled by natural gas located at Bldg 547
Ovens	
1.	One 0.2 MMBtu/hr oven fueled by natural gas located at Bldg 937
2.	One 0.7 MMBtu/hr oven fueled by natural gas located at Bldg 937
Aboveground Storage Tanks (ASTs) and Underground Storage Tanks (USTs)	
1.	One 233,193-gallon JP-8 aircraft fuel internal floating roof AST located at Bldg 350
2.	One 413,779-gallon JP-8 aircraft fuel external floating roof AST located at Bldg 351
3.	One 1,629,377-gallon JP-8 aircraft fuel external floating roof AST located at Bldg 356
4.	One 233,258-gallon JP-8 aircraft fuel internal floating roof AST located at Bldg 359
5.	One 25,000-gallon JP-8 aircraft fuel vertical fixed roof AST located at Bldg 366
6.	One 50,000 gallon diesel fuel vertical fixed roof AST located at Bldg 367
7.	One 25,000-gallon gasoline internal floating roof AST located at Bldg 368
8.	Four 10,000-gallon gasoline ASTs located at Bldg 177
9.	One 15,000-gallon gasoline UST located at Bldg 335
10.	One 1,000-gallon gasoline horizontal fixed roof AST located at Bldg 2201
Fuels Delivery Vessel	
1.	Loading/dispensing of fuel using one 1,200 gallon fueling vehicle, vehicle ID C-300
Woodworking	
1.	Three 4-foot diameter cyclone dust collector for both non-sanderdust and sanderdust type wood located at Bldgs 247, 339, and 415
2.	One 4-foot diameter cyclone dust collector for non-sanderdust type wood located at Bldg 948
General Solvent and Material Usage	

1.	Solvent and material usage at various bldgs on base, usage managed through Environmental Management Information System (EMIS)
Surface Coating	
1.	One paint booth sized 14 feet by 15 feet, with a 19-inch by 19-inch high solid pad that has a 99% PM removal efficiency used for painting wood at Bldg 247
2.	One paint booth sized 6 feet by 9 feet, with a HC Stranded Media filter that has a 99% PM removal efficiency used for painting signs at Bldg 339, HVLP spray gun used
3.	One paint booth sized 16 feet by 26 feet, with a 6 feet by 16 feet overspray collectors filter that has a 97.14% PM removal efficiency used for air crew training devices and associated parts at Bldg 415, HVLP spray gun used
4.	Brush painting, aerosol can spray painting, rolling, or dipping at other various bldgs on base, no HVLP spray guns used
Vehicle Refinishing	
1.	One paint booth sized 25 by 13 by 9 feet, with a 20-inch by 24-inch burner filter and a 28-inch by 21-inch floor filter that have a 99% PM removal efficiency used for painting vehicles at Bldg 235, HVLP spray gun used
2.	One paint booth sized 41 by 16 by 14 feet, with a downdraft filter that has a 99.71% PM removal efficiency used for painting vehicles at Bldg 291, HVLP spray gun used
3.	One paint booth sized 44 by 16 by 16 feet, with a 20-inch by 20-inch filter that has a 98% PM removal efficiency used for painting CARC paint & epoxy polyamide primers at Bldg 1390.
Aerospace Manufacturing and Rework	
1.	One F-16 paint booth, with a 20-inch by 20-inch polyester filter that has a 99.99% PM removal efficiency and a 24 by 24 by 3-inch carbon filter that has a 99.99% VOC removal efficiency used for painting aircrafts, aircraft parts and AGE equipment at Bldg 922 East, HVLP spray gun used, Model FID Flame total Hydrocarbon Analyzer and Data Max 8000S Gas Detection System installed
2.	One F-16 paint booth, with a 24-inch by 24-inch polyester filter that has a 99.99% PM removal efficiency and a 24 by 24 by 3-inch carbon filter that has a 99.99% VOC efficiency used for painting aircrafts, aircraft parts and AGE equipment at Bldg 922 West, HVLP spray gun used, Model FID Flame total Hydrocarbon Analyzer and Data Max 8000S Gas Detection System installed
3.	One paint booth sized 20 feet by 24 feet, with a 32 element 20-inch by 25-inch filter that has a 99.10% filter efficiency used for painting aircraft support equipment, trailers, air to air missiles, fuel tanks, and wheels at Bldg 1018, HVLP spray gun used
4.	One enclosed hanger with a 72 element 20-inch by 25-inch paper and rayon filter that has a 99.10% filter efficiency used for touch up and spot painting of aircraft and support equipment at Bldg 1019, HVLP spray gun used
Spray Paint Booth Dryers (Heat input values listed are at 100% load)	
1.	One 0.972 MMBtu/hr dryer fueled by natural gas located at Bldg 235
2.	One 0.15 MMBtu/hr dryer fueled by natural gas located at Bldg 291
Solvent Degreasers	
1.	Two 20-gallon degreaser located at Bldg 177
2.	One 20-gallon degreaser located at Bldg 179
3.	One 32-gallon degreaser located at Bldg 235
4.	One 7-gallon degreaser located at Bldg 291
5.	One 17-gallon degreaser located at Bldg 404

6.	One 25-gallon degreaser located at Bldg 415
7.	One 100-gallon and two 27.5-gallon degreasers located at Bldg 485
8.	One 34-gallon degreaser located at Bldg 930
9.	One 81-gallon degreaser located at Bldg 930A
10.	Two 15-gallon, one 30-gallon, and one 34-gallon degreasers located at Bldg 931
11.	One 34-gallon degreaser located at Bldg 978
12.	One 80-gallon degreaser located at Bldg 983
13.	One 17-gallon degreaser located at Bldg 999
14.	One 17-gallon degreasers located at Bldg 1018
15.	One 16-gallon degreaser located at Bldg 1022
16.	One 32-gallon and one-7 gallon degreaser located at Bldg 1233
17.	One 17-gallon and one 5-gallon degreasers located at Bldg 1240
18.	One 20-gallon degreaser located at Bldg 2201
Paint Gun Cleaners	
1.	One 5-gallon cleaner located at Bldg 235
2.	One 5-gallon cleaner located at Bldg 291
3.	One 5-gallon cleaner located at Bldg 1018
4.	One 5-gallon cleaner located at Bldg 1019
Abrasive Blasting	
1.	One 248 by 189.5 by 144-inch plastic bead abrasion machine with twenty-four 26-inch by 11-inch cartridge filters that have a filter efficiency of 92% located at Bldg 907

7.0 EMISSIONS FROM LAFB

Issues with the November 2002 updated Application that were resolved include the following:

A. Internal Combustion SVE Engine Resolution

The internal combustion SVE engine emissions have been calculated by LAFB using vendor source testing information, and AP-42 5th Edition, Section 3.2, and Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999. Based on source testing, VOC destruction in recovered hydrocarbon vapors is 99%. Maximum propane usage to ensure continued operation of the engine was assumed equivalent to 2000 usage.

B. Maximum Annual Operating Schedule Assumptions and Short-term Emission Calculations

All usages or throughputs provided by LAFB were assumed accurate based on EMIS information and/or estimates provided. Maximum annual operating schedule for the base based on 24 hours per day, 365 days per year, or 8,760 hours per year. Usages or throughputs were estimated by LAFB using total annual emission values from calendar year 2000 with a scaling factor of 3.0. Scaling was based on a one 8 hour shift per day, Monday through Friday (40 hours per week) increasing to a three 8 hour shifts per day, Monday through Friday (120 hours per week) for jet engine testing, aboveground storage

tanks, gasoline dispensing storage tanks, bulk loading and unloading operations, general solvent and material usage, surface coating activities, vehicle refinishing, aerospace manufacturing and rework and abrasive blasting. For fuel tank purging at Bldg 968, LAFB used 2000 values and scaled by a factor of 1.5.

Usage or throughput estimates based on U.S. EPA or MCESD guidance documents or pervious permits include emergency generators (assumed operating schedule of 500 hours per year), the peak shaving generator (assumed operating schedule of 1362 hours per year), external combustion equipment (assumed operating schedule of 8,760 hours per year), and woodworking activities (assumed operating schedule of 8,760 hours per year).

Other usage or throughput estimates include internal combustion SVE unit based on actual 12-month usage; solvent degreasers/gun cleaners based on mass balance equation and an increase in servicing by a factor of 4; and electric SVE unit based on hydrocarbon vapor flow rate.

Short-term emissions for all emission units at LAFB were calculated by dividing the calculated maximum annual emissions by the total number of hours in one year, 8,760 hours. This method of estimating short-term emissions directly from the annual emissions can lead to potential compliance problems, as the calculated short-term emission rates may not reflect occasional spikes in emission rates due to periods of increased operations or pollutant emitting activity. However, in discussions between MCESD and LAFB, it was determined that there are no emission units at LAFB that will require hourly or daily emission limits in the Title V Permit.

The nature of equipment and operations at LAFB is such that the facility's status as a major source for NO_x and VOC, and as a minor source for all other criteria and hazardous air pollutants, will not likely change without the addition of new emission sources. Such equipment or process additions would require submission of a permit modification application by LAFB. Consequently, additional emission limitations (such as a base-wide emissions cap) in the Title V Permit are not necessary to ensure that non-applicable requirements are not triggered. Therefore, the Title V Permit issued to LAFB will only contain emission limits and other requirements for specific equipment or processes that were previously applicable; e.g. by law, the Title V Permit cannot add new requirements. Such existing requirements could include emission limits, work practice standards and monitoring, record keeping and reporting provisions within applicable federal, state or local rules and within previous permits issued by MCESD to LAFB.

D. Emission Calculations and Equations

(1) Calculations involving fuel combustion

For some emission calculations and permit limits involving emissions in terms of heat input rate (e.g., pounds per million Btu), the heat input rate in terms of million Btu per hour (MMBtu/hr) is required. The heat input rate is a function of the heat content of the fuel (e.g., higher heating value or lower heating value), and the temperature and load conditions, among other variables. To convert from Btu to MMBtu, a conversion factor of $1x10^6$ Btu/MMBtu is used.

To convert from pounds of pollutant per million standard cubic feet ($lb/10^6$ scf) of natural gas fired to pounds per million British thermal units (lb/MMBtu) for natural gas burning equipment, a conversion factor of (1 $lb/10^6$ scf)/(1,020 lb/MMBtu) is used. To convert grams to pounds, a conversion factor of 453.6 grams per pound was used.

(2) Calculations involving surface coating

For some emission calculations and permit limits involving emissions from surface coating activities using hand-held painting tools, a transfer efficiency of 75% for PM_{10} was applied by LAFB. For surface coating, vehicle refinishing, and aerospace manufacturing and reworking (except Bldg 922), a transfer efficiency of 92% for PM_{10} though HVLP spray gun filters was applied by LAFB. For the painting operations in the F-16 paint booths in Bldg 922, Luke applied a transfer efficiency of 97% for PM_{10} and 99% for VOC. These percent control efficiencies are less than actual control efficiencies provided by the equipment manufacturers to conservatively over-estimate emissions.

(3) Calculations involving abrasive blasting

For emission calculations from abrasive blasting, a control efficiency of 92% for PM_{10} was applied based on fabric filter controls and the amount of waste material captured/collected.

(4) Calculations involving VOC controls

For emission controls from the electric SVE unit GAC canister, a capture efficiency of 97% for VOCs and HAPs was used. Emission controls from fuel storage tanks with a Stage I vapor recovery system or Stage I and Stage II vapor recovery system based on U.S. EPA AP-42 5^{th} Edition, Section 5.2.2.1.1.

(5) Calculations involving Above-Ground Storage Tanks

To estimate emissions from aboveground storage tanks, the U.S. Environmental Protection Agency TANKS 4.09b Program was used by LAFB to estimate total VOCs released. This is an accepted program to be used by MCESD.

(6) Calculations involving solvent and material usage

Solvent and material usage at LAFB is monitored through EMIS; a comprehensive database tracking system used by many DoD facilities for material authorization and usage tracking. When a material is authorized, it is entered into the database, including health and safety information, physical and chemical properties and constituent breakdown. It has been assumed that this database is accurate for the purpose of estimating emissions regulated under Title V regulations.

(7) Emission Factor References

The references listed below are used to obtain emission factors, including direct values and equations for emission factors and emission calculations. These are listed to correct for any inconsistencies in the Application tables or text. These references are assumed to be used based on potential to emit calculations, and the final Permit is based on values obtained using the following references. Sections and/or tables from the Application listed in this section of the TSD are supplemental and/or revised information that was provided by LAFB since the technical review of the application began.

a. Emissions for natural gas burning internal combustion emergency generators are calculated using the following:

i. AP-42 5th Edition, Table 3.2-1 Uncontrolled Emission Factors for 2-Sroke Lean-Burn Engines, 90-105% Load

b. Emissions for diesel burning internal combustion emergency generators (less than 600 horsepower [Hp]) are calculated using the following:

i. AP-42 5th Edition, Table 3.3-1 Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines

ii. AP-42 5th Edition, Table 3.3-2 Speciated Organic Compound Emission Factors for Uncontrolled Diesel Emissions

c. Emissions for diesel burning internal combustion emergency generators (greater than 600 Hp) are calculated using the following:

i. AP-42 5th Edition, Table 3.4-1 Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines

ii. AP-42 5th Edition, Table 3.4-3 Speciated Organic Compound Emission Factors for Large Uncontrolled Stationary Diesel Engines

iii. Changes made to Tables 3-5, 3-6, and 3-7 by Kleinfelder on behalf of LAFB include the correction of emission factors (EF) used and subsequent emission (E) calculations for the two 800 kW diesel burning internal combustion engine generators. The following emission factors and emissions were corrected:

NO_x, EF = 14.59 grams /kW-hr; E = 25.7 lb/hr or 12,866 lb/yr
VOC, EF = 0.429 grams/kW-hr; E = 0.757 lb/hr or 378.3 lb/yr
SO_2, EF = 14.75 grams/kW-hr; E = 26.0 lb/hr or 13,007 lb/yr
CO, EF = 3.34 grams/kW-hr; E = 5.89 lb/hr or 2,945 lb/yr
PM_{10}, EF = 0.426 grams/kW-hr; E = 0.751 lb/hr or 375.7 lb/yr

d. Emissions for natural gas burning internal combustion peak-shaving generator are calculated using the following:

i. AP-42 5^{th} Edition, Table 3.2-1 Uncontrolled Emission Factors for 2-Sroke Lean-Burn Engines, 90-105% Load for SO_2, PM_{10},HAPs, and VOC (see iv below)

ii. Vendor Source Testing for NO_x and CO

iii. Changes made to Tables 3-5, 3-6, and 3-7 by Kleinfelder on behalf of LAFB include the correction of emission factors used and subsequent emission calculations for the natural gas burning internal combustion peak shaving generator. The equation used to correct the emissions is similar to the example equation shown in Section 3.1.1.1 of the Application for toluene. The following emission factors and emissions were corrected:

SO_2, EF = 5.88 x 10^{-4} lb/MMBtu; E = 0.0025 lb/hr or 3.42 lb/yr
PM_{10}, EF = 3.84 x 10^{-2} lb/MMBtu; E = 0.164 lb/hr or 223 lb/yr

iv. Changes made to Tables 3-5, 3-6, and 3-7 by Kleinfelder on behalf of LAFB include the use of AP-42 5^{th} Edition, Table 3.2-1 Uncontrolled Emission Factors for 2-Sroke Lean-Burn Engines, 90-105% Load for VOC. The equation for VOC shown in Section 3.1.1.2 of the Application was also changed to be similar to the example equation shown in Section 3.1.1.1 of the Application for toluene. Using this emission factor and equation, the following emissions were corrected:

VOC, EF = 0.12 lb/MMBtu; E = 0.512 lb/hr or697.07 lb/yr

v. A minor error in the calculation of HAP emissions from the peak shaving generator was corrected in Tables 3-6 and 3-7. HAP emissions (with the exception of ethylbenzene) were erroneously divided by 0.3, thus are represented 3.33 times to high. The equation used to correct the emissions is similar to the example equation shown in Section 3.1.1.1 of the Application for toluene. The following emissions were corrected:

Formaldehyde, E = 0.235 lb/hr or 320.7 lb/yr
Acetaldehyde, E = 0.033 lb/hr or 45.1 lb/yr
Toluene, E = 0.0041 lb/hr or 5.59 lb/yr
Xylene, E = 0.0011 lb/hr or 1.56 lb/yr
1,3-Butadiene, E = 0.0035 lb/hr or 4.76 lb/yr
Benzene, E = 0.0083 lb/hr or 11.3 lb/yr
Acrolein, E = 0.033 lb/hr or 45.2 lb/yr

e. Emissions for JP-8 burning aircraft internal combustion engines are calculated using the following:

i. Air Emissions Inventory Guidance Document for Mobil Sources at Air Force Installations, January 2002, Section 3.2(a) Emission Calculations

ii. Air Emissions Inventory Guidance Document for Mobil Sources at Air Force Installations, January 2002, Table 3-3 Criteria Pollutant Emission Factors for Aircraft Engines

iii. Air Emissions Inventory Guidance Document for Mobil Sources at Air Force Installations, January 2002, Table 3-5 Hazardous Air Pollutants for Aircraft Engines and Auxiliary Power Units

f. Emissions for the propane gas burning internal combustion SVE unit are calculated using the following:

i. AP-42 5th Edition, Table 3.2-1 Uncontrolled Emission Factors for 2-Sroke Lean-Burn Engines, 90-105% Load for HAPs when burning propane (assumed equivalent to natural gas)

ii. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Section 13.2(b) Emission Calculations for HAP Emissions when burning fuels

iii. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Table 13-2 Liquid-phase and Vapor-phase Speciation of JP-8 for HAPs

iv. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Table 13-3 Liquid-phase and Vapor-phase Speciation of Diesel Fuel for HAPs

v. Vendor Source Testing for NO_x, CO, and VOC (no SO_x or PM_{10} detected during source testing)

g. Emissions for natural gas burning external combustion equipment are calculated using the following:

i. AP-42 5^{th} Edition, Table 1.4.1 Emission Factors for Nitrogen Oxides (NO_x) and Carbon Monoxide (CO) from Natural Gas Combustion

ii. AP-42 5^{th} Edition, Table 1.4.2 Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion for PM_{10}, SO_2, and VOC

iii. Ventura County Air Pollution Control District, Combustion Emission Factors for AB 2588 Inventories, 1992, for HAPs

h. Emissions for gasoline, diesel and JP-8 fuels aboveground storage tanks are calculated using the following:

i. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Section 13.2(b) Emission Calculations for HAP Emissions when storing fuels

ii. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Table 13-2 Liquid-phase and Vapor-phase Speciation of JP-8 for HAPs

iii. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Table 13-3 Liquid-phase and Vapor-phase Speciation of Diesel Fuel for HAPs

iv. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Table 15-2 Liquid-phase and Vapor-phase HAP Speciation of Gasoline

v. U.S. Environmental Protection Agency TANKS 4.09b Program for total VOC

i. Emissions for gasoline fuels underground storage tanks are calculated using the following:

i. AP-42 5th Edition, Table 5.2-7 Evaporative Emissions from Gasoline Service Station Operations for total VOC

ii. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Section 13.2(b) Emission Calculations for HAP Emissions when storing fuels

iii. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Table 15-2 Liquid-phase and Vapor-phase HAP Speciation of Gasoline

j. Emissions for bulk loading and unloading operations are calculated using the following:

i. AP-42 5th Edition, Section 5.2.2.1.1 Loading Losses, Equation 1

ii. AP-42 5th Edition, Section 5.2.2.1.1 Loading Losses, and Table 5.2-1 Saturation (S) Factors for Calculating Petroleum Liquid Loading Losses for Saturation Factor and Capture Efficiency.

iii. AP-42 5th Edition, Table 7.1-2, Properties (M_v, W_{vc}, P_{va}, W_l) of Selected Petroleum Liquids for True Vapor Pressure of Liquid Loading, Molecular Weight

iv. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Section 13.2(b) Emission Calculations for HAP Emissions when storing fuels

v. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Table 15-2 Liquid-phase and Vapor-phase HAP Speciation of Gasoline

vi. Changes made to Tables 3-23, 3-24, and 3-25 by Kleinfelder on behalf of LAFB include the correction of emission factors used and subsequent emission calculations for the bulk loading and unloading operations of gasoline. The equation used to correct the emissions is similar to the example equation shown in Section 3.5 of the Application for toluene. To use the above equation, the vapor-phase

weight fraction of gasoline must be used. The following emission factors and emissions were corrected:

Hexane, EF = 0.5%, E = 1.73 x 10^{-5} lb/hr or 0.152 lb/yr
2,2,4 Trimethylpentane, EF = 0.7%, E = 2.43 x 10^{-5} lb/hr or 0.213lb/yr
Napthalene, EF = Negligible
Xylene, EF = 0.2%, E = 6.94 x 10^{-6} lb/hr or 0.061 lb/yr
Ethylbenzene, EF = 0.04%, E = 1.39 x 10^{-6} lb/yr or 0.012 lb/yr
Benzene, EF = 0.6%, E = 2.08 x 10^{-5} lb/hr or 0.182 lb/yr
Toluene, EF = 0.7%, E = 2.43 x 10^{-5} lb/hr or 0.213 lb/yr
Methyl tert-butyl ether, EF = 4.6%, E = 1.6 x 10^{-4} lb/hr or 1.4 lb/yr
Cumene, EF = 0.6%, E = 6.94 x 10^{-7} lb/hr or 0.0061 lb/yr

k. Emissions for woodworking activities are calculated using the following:

i. Maricopa County Emission Inventory Instruction for Woodworking Industry, 2000

ii. Changes made to Table 3-26 by Kleinfelder on behalf of LAFB include the deletion of emission calculations for activities at Bldg 318. Emissions associated with equipment in Bldg 318 are not emitted to the ambient air.

l. Emissions for general solvent and material usage are calculated using the following:

i. Material Safety Data Sheet (MSDS) information stored in the Environmental Management Information System (EMIS), includes VOC and HAPs percent in material

m. Emissions for surface coating activities are calculated using the following:

i. MSDS information stored in EMIS, includes VOC and HAPs percent in material

n. Emissions for vehicle refinishing are calculated using the following:

i. MSDS information stored in EMIS, includes VOC and HAPs percent in material

ii. MSDS information recorded in a manual log per Maricopa County Air Quality Rule 345

o. Emissions for aerospace manufacturing and rework are calculated using the following:

i. MSDS information stored in EMIS, includes VOC and HAPs percent in material

p. Emissions for solvent degreasing and paint gun cleaner operations are calculated using the following:

i. MSDS information provided by manufacturer, includes VOC and HAPs percent in material

ii. Mass balance equation

q. Emissions for fuel tank purging are calculated using the following:

i. AP-42 5th Edition, Section 7.1.3.1 Total Losses from Fixed Roof Tanks, Equation 1-9 Vapor Density (W_v)

ii. AP-42 5th Edition, Table 7.1-2, Properties (M_v, W_{vc}, P_{va}, W_l) of Selected Petroleum Liquids for True Vapor Pressure of Liquid Loading, Molecular Weight

iii. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Section 13.2(b) Emission Calculations for HAP Emissions when handling fuel

iv. Air Emissions Inventory Guidance Document for Stationary Sources at Air Force Installations, May 1999, Table 13-2 Liquid-phase and Vapor-phase Speciation of JP-8 for HAPs

r. Emissions for abrasive blasting are calculated using the following:

i. Mass balance equation

E. LAFB Potential to Emit

Changes made to emission factors and calculations in the Application information by Kleinfelder on behalf of LAFB changed the summary of annual and hourly emissions of criteria pollutants and HAPs at LAFB provided in Tables 3-1 through 3-4 of the

Application. Tables 7-2 and 7-3 of this TSD, below, present the facility wide annual and hourly emissions of criteria pollutants and HAPs based on changes noted in this TSD.

Table 7-2
Facility Wide Annual and Hourly Emissions for Criteria Pollutants

Criteria Pollutants	Total Emissions in pounds per hour	Total Emissions in tons per year
CO	13.8	60.5
NO_x	28.8	126.2
PM_{10}	5.7	24.8
SO_2	3.8	16.5
VOC	29.2	127.8

Table 7-3
Facility Wide Annual and Hourly Emissions for Federal Hazardous Air Pollutants (HAPs)

Hazardous Air Pollutant	Total Emissions in pounds per hour	Total Emissions in tons per year
Aggregate Total of All HAPS	0.532	10.02
Formaldehyde	0.105	0.462
Methanol	0.0631	0.276
Benzene	0.0545	0.239
1,1,1 -TCA	0.00274	0.0120
Acetaldehyde	0.0187	0.0818
Methylene Chloride	0.0750	0.329
Methyl Ethyl Ketone	0.821	3.60
Naphthalene	0.0332	0.145
Cumene	0.0276	0.121
Ethyl Benzene	0.0410	0.180
1,3-Butadiene	0.00175	0.00765
Acrolein	0.0130	0.0570
Ethylene Glycol	0.00875	0.0383
Toluene	0.542	2.37
Chlorobenzene	0.0135	0.0593
Hexane	0.0976	0.428
Diethylene Glycol Monomethyl Ether (DGMME)	0.0881	0.386
Lead Compounds	0.00425	0.0186
Xylenes	0.315	1.38
Antimony	0.00197	0.00862
Chromium	3.38E-06	1.48E-05
Hydrofluoric Acid	8.89E-05	3.89E-04

8.0 APPLICABLE REQUIREMENTS

In order to trigger the applicability of Maricopa County Rule 210 Title V Permit requirements the proposed project must meet the definition of a "major source." As shown in Table 8-1, below, the proposed facility is a major source for NO_x and VOC.

A. Permitting Requirements

As Table 8-1 demonstrates, the proposed facility is a major source for NO_x and VOC under Maricopa County Regulation II, Rules 200 and 210, which implement the federal Title V operating permit program requirements.

As a major source, LAFB is required to obtain a Title V Permit. The permit application submitted by LAFB lists applicable requirements and contains compliance information,

as well as a certification of compliance, which are all required as part of a Title V Permit Application.

Table 8-1
Determination of Major Source Applicability

Pollutant	Luke AFB Emissions (TPY)	Major Source Threshold (TPY)	Major Source?
NO_x	**126.20**	**50**	**Yes**
CO	**60.45**	**100**	**No**
SO_2	**16.49**	**100**	**No**
PM_{10}	**24.80**	**70**	**No**
VOC	**127.82**	**50**	**Yes**
Aggregate HAPs	**10.02**	**25**	**No**
Individual HAP	**3.6**	**10**	**No**

B. Other Applicable Requirements

The other applicable requirements were addressed in Sections 5 and 7 of the Application submitted by LAFB. The LAFB Compliance Plan, Table 7-1 from the Application submitted by LAFB, summarizes the federal, state and local regulations and Maricopa County State Implementation Plan (SIP) provisions that are applicable to LAFB.

C. Existing Permits Issued to LAFB

Based on information from MCESD files, the following four permitting actions involve LAFB:

(1) An October 2, 1990 permit was issued by the Maricopa County Department of Health Services to Luke Air Force Base. It contains conditions pertaining to the submittal of annual reports on total VOC emissions from the facility, the quantity of JP-4 combusted in the "hush houses" and bulk fuel storage tanks, and other conditions pertaining to monitoring of the JP-4 vapor incinerator, monitoring the "day tanks" (Bldgs 350 and 359), maintaining tank truck certification, operation of a pathological incinerator and requirements for subsequent permit revisions.

Since issuance of the permit, LAFB discontinued all operations involving JP-4 fuel. They have indicated that they have no plans to resume such operations and would require a submittal of a modification application to MCDES to do so. Therefore, the October 2, 1990 permit no longer applies to current operations at LAFB. Accordingly, none of the conditions in the permit were incorporated into the Title V permit.

(2) LAFB filed an application for a minor permit modification, to allow installation of a soil vapor extraction (SVE) system and thermal oxidizer to remove and incinerate volatile organic compounds from contaminated soil near Bldg 353. There was no record that MCESD ever issued a permit modification. However, the system was

installed with a Ford 460 cubic inch engine used to generate the vacuum necessary to extract the vapors and incinerate the vapors rather than a thermal oxidizer.

(3) A significant revision (No. S97-012) to Air Quality Permit No. 8602890, dated May 12, 1998, which established emission limitations, monitoring, record keeping and reporting requirements and initial performance testing requirements for the "peak shaving generator", a Model Q, 1,765 bhp natural gas-fired, lean burn, 4-stroke engine driving an electrical generator and located at Bldg 1158. These requirements will be incorporated into the Title V Permit, with the exception of the conditions pertaining to the initial performance testing, which has already been completed. The operational limits included a new 12 month rolling hours of operation limit. This number was calculated using the test results and previous yearly emission limits. The annual limit for CO was the most limiting factors. LAFB is limited to 1362 hours per rolling twelve month period. This ensures that the previous ton per year limit calculation will not be exceeded. The weekly visible emission language has also been updated. A Method 9 reading is only necessary if emissions are observed during regular operations or during the daily visible emission check.

(4) A minor permit modification (No.11-25-98-01), entitled "Additional Permit Conditions to the Existing Permit", to Air Quality Permit No. 8602890, dated February 9, 1999, which establishes operating, monitoring and record keeping requirements for two surface coating booths in Bldg 922, an abrasive blasting "glove box" at Bldg 917, a 0.726 MMBtu/hour, natural gas-fired boiler in Bldg 565 (replacing a smaller boiler at that location) and a propane-fired Ford 460 cubic inch engine, located at Bldg 321. It is unclear if the Ford engine is the one that currently serves as one of the soil vapor extraction (SVE) systems, which is currently located at Bldg 353.

All of these requirements will be incorporated into the Title V Permit.

(5) A minor permit modification (No. 7-29-99-01), entitled "Additional Permit Conditions to the Existing Permit", to Air Quality Permit No. 8602890, dated October 27, 1999, which establishes operating, monitoring and record keeping requirements for "low-NO_x" burners (LNB) on four boilers, located at Bldgs 663, 673, 700 and 820. This permit modification also documents the addition of seven boilers, three solvent cleaners, two emergency generators and one 1000-gallon gasoline storage tank, and the removal of five boilers, two burners and two emergency generators at numerous locations throughout the base.

Only one of the listed boilers was eventually equipped with the LNB technology. The remaining three low NOx boilers were never installed and LAFB is no longer permitted for this installation. Therefore, these requirements will only be incorporated with one change for the LNB at Bldg 663. This change was at the request of LAFB. The change from the previous permit conditions includes the maintenance/tune up conditions. Yearly maintenance and tune ups will continue to be a requirement for the existing low VOC

boiler but the use of an electronic analyzer during the maintenance procedure is optional and no longer a requirement.

D. Applicability Decisions made During the Review of the Application

During the technical review of the application submitted by LAFB, several decisions were reached relative to the actual applicability of certain federal and local rules. The following items document the more significant of these decisions.

(1) Wastewater Treatment Plant

LAFB identified the wastewater treatment plant, located 1.5 miles east of the base, within the application. The plant is subject to Maricopa County air pollution control Rule 320. MCESD evaluated applicability of 40 CFR Part 60, Subpart O (NSPS for Municipal POTWs). This rule only pertains to the incineration of waste material. LAFB does not conduct incineration of waste material; therefore this rule does not apply. County Rule 320 and 270 will apply to the wastewater treatment plant.

(2) Petroleum Storage Tanks

LAFB identified several large petroleum storage tanks in their application, including their capacity and contents. All of them are subject to one or more Maricopa County regulations as identified in the LAFB Compliance Plan, Table 7-1 from the Application submitted by LAFB. Based solely on the tank sizes and contents, several were determined to be not subject to NSPS Subparts K, Ka or Kb. However, the tanks at Bldgs 351, 356 and 367 could not be excluded from regulation under Subpart Kb based on capacity and contents, alone. Rather, applicability of this federal rule would turn on their construction dates. LAFB provided construction dates for each tank at the base. The construction dates for the three tanks in question precede the applicability date of Subpart Kb (July 23, 1984). Therefore, NSPS Subpart Kb does not apply to any petroleum storage tanks at LAFB except for the recordkeeping requirements of the 40 CFR 60 Subpart Kb §116 (a) & (b).

County Rules 350 through 353 apply to petroleum storage tanks at LAFB whose contents have a true vapor pressure over 1.5 psia. JP-8 and diesel have a vapor pressure of approximately 0.2 psia. Therefore, tanks 350, 351, 356, 359, 367 and 367 are not subject to these rules.

(3) Delivery Vessels

LAFB does not use delivery vessels to transport gasoline. They are used to transport JP-8 or other VOL that have vapor pressures less than 1.5 psia. County Rule 353 does not apply to these delivery vessels.

(4) Low NOx Boilers

A previous permit revision was issued 10/27/99 to LAFB for the installation of low-NO_x boilers in four buildings. However, only the 3.5 MMBTU/hr low-NO_x boiler in Bldg 820

was installed. The previous permit revision established NO_x and CO emission limitations, which are incorporated into Condition No. 26 Paragraph D of the draft Title V permit for the one boiler. The previous permit revision also required that the boilers be tested within a specified time frame to verify compliance with the emission limitations. LAFB and MCESD verified that this occurred within the required timeframe and that the boiler emissions complied with the limitations expressed in the permit revision. Therefore, it was decided that there was no need to incorporate any of the previous permit conditions into the Title V permit, except the emission limitations for the boiler in Bldg 820.

(5) Aerospace Coating Operations at Bldg 922 and 1018

The aerospace coating operations in Buildings 922 and 1018 are subject to Rule 348, however, since LAFB is not a major source of HAPs, it is not subject to the federal MACT standard codified at 40 CFR Part 63.

(6) Architectural Coatings and Cutback and Emulsified Asphalt

LAFB initially expressed concern that compliance with Rules 335 (Architectural Coating) and 340 (Cutback and Emulsified Asphalt) should be the responsibility of contractors and should not be included in the Title V Permit. However, LAFB cannot be absolved of its compliance obligations with regard to these requirements. LAFB can develop a contractor compliance assurance strategy that fits their particular needs. In addition, MCESD was concerned that LAFB personnel could be tasked with conducting architectural coating or pavement sealing projects; therefore, the applicable requirements should be identified in the permit. Finally, omitting these requirements from the permit would remove any permit shield protection for LAFB.

(7) Tactical Support Equipment

The military uses many small engines to power radar, communications and to start aircraft. These engines are commonly referred to as Tactical Support Equipment (TSE), Aerospace Ground Equipment (AGE), Support Equipment (SE) or Ground Support Equipment (GSE). The engines can be both reciprocating and turbine engines. The predominant use of TSE at Luke Air Force Base (LAFB) is for starting aircraft. The maximum input for the equipment on site at LAFB is 0.273 MMBtu per hour. The TSE are moved with the air squadrons when they are deployed around the world as needed for national defense.

The TSE located at LAFB are mobile internal combustion engines and they do not remain at one location for more than a year. These engines are not regulated by an NSPS since the maximum input of BTUs per hour is well below the threshold of the 40 CFR Subpart GG of ten million. The TSE are considered "nonroad engines".

Nonroad engines are excluded from the definition of "stationary source" under the Clean Air Act [Clean Air Act §302]. Permitting authorities may not control emissions from nonroad engines [Clean Air Act §209(e)(1), (e)(2)(B)], and may only impose "in use" requirements [59 Fed. Reg. 31306 (June 17, 1994)].

The TSE at LFAB have not been included in their Title V permit since MCESD can not regulate their emissions and their Potential to Emit (PTE) are not included in emissions calculations for applicability purposes.

(8) There are three buildings, (247, 339, and 415), located at LAFB that have woodworking operations that vent particulate matter through cyclones into the ambient air. Located in building 247 is a hobby shop. The hobby shop provides air force personnel and retirees access to woodworking tools for personal use. This building is open 35 hours per week and last year the wood waste collected from the cyclone hopper was less than 1 cubic meter. Located in building 415 is a model shop active less than 45 hours per week. The purpose of the model shop is to construct and repair mock cockpits for pilot training. It takes about a year to make one cockpit, therefore production is very small and the wood waste collected in the cyclone hopper is less than 2 cubic meters per year. Building 339 is a repair and maintenance shop which supports facilities management. This building is active around 45 hours per week and waste collected from the cyclone hopper is less than 8 cubic meters per year.

A demonstration of why County and SIP Rule 311 was never intended to regulate these workshop activities can be shown by MCESD's inability to define a quantification of the process rate according to the definition from the rule in section 206. Section 206.1 states;

> *"For continuous or long-run steady-state operations, the total process weight for the entire period of continuous operation or a typical portion thereof, divided by the number of hours of such period or portion thereof"*

Section 206.1 defines a process rate for an assembly like process. Raw material is processed continuously for a final product. This does not pertain to LAFB since activities in the three areas of woodworking are performed on an as needed basis and cannot be considered continuous. Section 206.2 attempts to quantify "process weight" for batch or cyclical operations. The Rule states;

> *"For cyclical or batch operations, the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period".*

It's not practical to quantify a complete operation or a series of integral cycles for the small shops at LAFB. Section 206.2 refers to production of a specific product in one step or a number of steps. The weight of the raw material is summed, and then the number of hours for each step is summed and used to calculate the process weight. LAFB does not produce a specified product and the number of cycles or steps would be infinite for each of the three woodworking activities. Therefore it is impossible to accurately quantify a process rate for these activities according to the definitions from the rule in section 206.

Calculations provided by LAFB indicate that post control emissions from the three small auxiliary woodworking operations are less than one ton per year using conservative emission factors. LAFB's primary function is training F-16 pilots; therefore MCESD does not categorize woodworking at this facility as a process industry subject to County Rule 311. The applicable requirements for the minor woodworking operations at LAFB are County Rule 300 in combination with a permit requirement to maintain purchase records of wood material to ensure that these activities do not grow in magnitude. If the operations at these buildings change to a point where a process rate can be calculated as defined in section 206, MCESD may reevaluate the applicability of County and SIP Rule 311.

(9) Test Cells

County Rule 300 is the only applicable requirement concerning the test cells. The opacity limit will be monitored by weekly V.E. checks as stated in the permit. County Rule 320 will also not be applicable. This rule regulates industrial equipment, such as boilers, from burning fuel containing a sulfur content of 0.05 percent or more by weight. Rule 320 does not regulate non-mobile sources such as the turbine engines at LAFB.

(10) Spray Coating in Building 922

LAFB uses building 922 to apply spray coatings to aircraft. Building 922 is equipped with fabric filters and an activated carbon absorption system to capture particulate and VOC respectively. They also have a flame ionization to continually check for high VOC emissions. At the time of the permit issuance, LAFB has not shown 81% capture efficiency for VOC. The 81% efficiency is required in order to use non-compliant coatings according to County Rule 348. LAFB needed more time to research this issue. To expedite the issuance of the Title V permit a compliance plan has been added to the Permit. This plan allows LAFB 30 days after the issuance of this permit to supply this Department information to verify the efficiency. If this Department agrees that the 81% efficiency has been shown, at that time LAFB has completed the compliance plan. If this Department feels that the proper efficiency has not been verified, LAFB will be prohibited from using non-compliant coatings (as defined in County Rule 348) until source testing has been completed and analysis showing the allowable efficiency. The testing must be performed in accordance with all County Rules.

9.0 PERMIT STREAMLINING

Permit streamlining occurs in cases where an emissions unit may be subject to more than one requirement (typically one local and one federal rule). If the applicant agrees, the most stringent requirement is placed into the Title V Permit, which becomes federally enforceable. LAFB has not requesting any permit streamlining for the Title V Permit. Furthermore, there is little, if any, overlap between federal and Maricopa County requirements applicable to LAFB. Certain Maricopa County requirements applicable to LAFB are not federally enforceable. In these circumstances, the federal enforceability of the requirement is clarified in the regulatory citation that follows each permit condition.

10.0 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT)

None of the MACT standards codified at 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants for Source Categories) apply to LAFB because, as a minor source of HAP, the facility wide potential to emit for HAPs is less than the 10 TPY of any one individual HAP or 25 TPY for the aggregate HAPs thresholds.

11.0 BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

BACT does not apply because there are no sources subject to the federal New Source Performance Standards (NSPS) codified at 40 CFR Part 60, and this Title V Permit application is not for a new major source or a major modification, as provided in MCESD Rule 241.

12.0 REASONABLE ACCEPTABLE CONTROL TECHNOLOGY (RACT)

Most of the Maricopa County rules that are identified herein constitute RACT.

13.0 AIR QUALITY IMPACT ASSESSMENT FOR ARIZONA AMBIENT AIR QUALITY GUIDLINES

For modeling purposes, LAFB is an existing source, and the individual devices at the facility have been previously permitted. LAFB is not seeking any emissions increases for the previously permitted devices. MCESD did not require an off-site impacts assessment for criteria pollutants. MCESD did require LAFB to conduct an analysis of off-site air toxics impacts, by conducting dispersion modeling to evaluate these impacts. The Arizona Ambient Air Quality Guidelines (AAAQG) are a listing, published by the Director of the Arizona Department of Environmental Quality (ADEQ), of one-hour, three-hour, 24-hour and annual ambient concentrations of 265 toxic air pollutants. In general, applicants must show that their emissions do not exceed these concentrations. LAFB used the conservative SCREEN3 model, which is approved by the U.S. EPA and the MCESD for use in these situations. None of the off-site air toxic concentrations predicted by the model exceed the AAAQG levels.

14.0 MONITORING AND COMPLIANCE DEMONSTRATION PROCEDURES

The LAFB Compliance Plan, Table 7-1 from the Application submitted by LAFB, summarizes the federal, state and local regulations and Maricopa County State Implementation Plan (SIP)

provisions that are applicable to LAFB. This table also identifies the methodology proposed by LAFB to demonstrate compliance with each of these requirements.

15.0 PERMIT SHIELD

An important concept under the federal Title V program is the "permit shield". The regulations provide that compliance with a permit condition is deemed to constitute compliance with the underlying rule or requirement. This places a burden on the permitting authority to make sure that each permit condition is written to be as consistent with the language of the underlying requirement as practical. The permit shield also creates a strong incentive for applicants to ensure that all applicable requirements are adequately identified in their application and in the resulting permit document. Consequently, LAFB has prepared a separate listing, which lists every federal, state and local regulation, SIP requirement and permit condition determined to be applicable to the facility. This listing is included in Appendix B of the Title V Permit.

16.0 CONCLUSION AND PROPOSED ACTION

Based on the information supplied by LAFB, and on the analyses conducted by the MCESD and Kleinfelder, MCESD has determined that the continued operation of the base will not cause or contribute to a violation of any federal ambient air quality standard, will not cause any AAAQG to be exceeded, and will not cause additional adverse air quality impacts.

Therefore, issuance of a Title V Air Quality Operating Permit to the 56th Fighter Wing Luke Air Force Base is recommended. The Air Quality Operating Permit serves as an authority to operate the facility, subject to the terms and conditions contained therein. The term of Title V Permits is five years. The federal Clean Air Act, the federal Title V implementation regulations codified at 40 CFR Parts 70 and 71, the Arizona Revised Statutes and the Maricopa County air quality permitting requirements codified at Regulation II all provide that certain facility operational changes will trigger a requirement to modify or reopen a Title V Permit, subject to the public review and EPA veto.

APPENDIX E
Attached O&M Plans

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
July 20, 2004

Adopted 22 Mar 04

56th Civil Engineer Squadron
Environmental Flight
Located at Luke Air Force Base

Permit No. 8602890

ICE SVE UNIT
Building 353

Operation and Maintenance Plan

Prepared by 56 CES Air Program Manager

HEALTH, SAFETY AND ENVIRONMENTAL
March 2004

Table of Content

Attachments:

- Sample Maintenance Log

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
July 20, 2004

OPERATION AND MAINTENANCE PLAN
FOR

ICE SVE UNIT

I GENERAL INFORMATION

Business Name: 56 Fighter Wing

Business Address: Bldg 353, Luke Air Force Base, Arizona 85309-1149

Permit Number: 8602890

Date of Preparation/Revision: 22 Mar 04

General description of overall facility operations: Training aircrew and maintenance personnel on the F-16 aircraft

Brief description of process(es) ducted to control device including pollutants emitted: DESCRIPTION OF PROCESS: The extraction of vapors from Soil Vapor Extraction (SVE) wells screened in the contaminated soils using the intake manifold vacuum of the engine. The vapors are then burned as fuel to run the engine. The exhaust gasses pass through a standard catalytic converter for complete oxidation before being discharged into the atmosphere. Two extraction wells (EW) are installed to a depth of 150 feet below ground surface (bgs). Each EW consists of two, 2-inch diameter Schedule 40 PVC wells, nested within the same borehole. All piping from each EW to the centrally located manifold system is constructed of 2-inch diameter PVC that is buried approximately 12 to 18 inches bgs. A main pipe connects the two EWs and the ICE unit is connected to the main pipe header using 2-inch flexible hose. The ICE unit is located midway between the two EWs. A 500-gallon ICE supplemental fuel (propane) storage tank is located at 13 feet from the ICE unit to ensure smooth operation of the engine as the extracted soil gas vapor concentrations fluctuate.

Complete description of control device(s) covered by the plan including manufacturer, model, rated capacity, total number of identical units, equipment identification number, etc.:

Model V3 ICE unit, using a Ford® 460-cubic-inch-displacement engine block, heads, a catalytic converter, and an onboard computerized monitoring system.

II. OPERATIONS PLAN

Continuous monitoring of system by an on-board computer
Monthly PM

III. MAINTENANCE PLAN

Continuous Monitoring of system by the Phoenix 1000 controller includes the following and will shut down automatically if one or more of the following exceed parameters set:

1. Oxygen ratio between 10 and 20 %
2. Fuel ratio (propane and extracted soil gas) is variable based on vapor concentrations be extracted from the well
3. Coolant temperature – 170 – 185^{o} F
4. Engine oil pressure: 40 – 50 psi
5. Exhaust oxygen: 1775 – 1825 ppmv (O2 Sensor reading post cat. temp)
6. Exhaust temperature: 1140 – 1220^{o}F
7. Engine Speed: 1800 – 2100 RPMs
8. Fuel flow rates
9. Inches of vacuum pressure: >18
10. Supplemental fuel consumption
11. Engine hours
12. High water level in the SVE well gas filter assembly

Monthly PM

1. Influent and effluent sampling and lab analysis is performed to ensure efficiency
2. Check oil level and filter
3. Coolant level
4. Check Alternator belts (Replace as needed.)
5. Inspect air filter
6. Check well gas filter
7. Inspect vacuum hoses
8. Inspect spark plugs
9. Inspect blow radiator
10. Inspect oxygen sensor.
11. Record engine hours for the month.
12. Check battery condition: > 13 Volts
13. Tighten exhaust bolts

NOTES: Records are required to be maintained for a minimum of five years.

IV. TRAINING REQUIREMENTS

Not Required. All training is and frequency of training is dictated by Parson's Engineering.

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
July 20, 2004

Adopted 22 Mar 04

56th Services Squadron
Wood Skills Shop
Located at Luke Air Force Base

Permit No. 8602890

Cyclone
Building 247

Operation and Maintenance Plan

Prepared by 56 CES Air Program Manager

HEALTH, SAFETY AND ENVIRONMENTAL
March 2004

Table of Content

Attachments:

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
July 20, 2004

Sample Maintenance Log

OPERATION AND MAINTENANCE PLAN

FOR
CYCLONE

I GENERAL INFORMATION

Business Name: 56 Fighter Wing

Business Address: Bldg 247, Luke Air Force Base, Arizona 85309-1149

Permit Number: 8602890

Date of Preparation/Revision: 22 Mar 04

General description of overall facility operations: Training aircrew and maintenance personnel on the F-16 aircraft

Brief description of process(es) ducted to control device including pollutants emitted: The Cyclone is used in the wood hobby shop to extract wood dust from several operations.

Complete description of control device(s) covered by the plan including manufacturer, model, rated capacity, total number of identical units, equipment identification number, etc.:
The unit is a United Air Specialist Incorporated Cyclone. The cyclone is designed with removable air filters, no make or model number.

II OPERATIONS PLAN

Daily (when in use) – PM
Weekly PM
Monthly PM

III MAINTENANCE PLAN

Daily
1. Check drum prior to start up, if drum is ¾ full empty.
2. Check filters screen for any obstructions

Weekly:
1. Check and empty drum
2. During operations a visual inspection will be performed to ensure no visual emissions are coming from the unit

Monthly:
1. Check ductwork, looking for loose and missing hardware
2. Check ductwork, looking for holes
3. Remove and replace filters

NOTES: Records are required to be maintained for a minimum of five years.

IV TRAINING REQUIREMENTS

Training will be documented in the worker's personnel file.

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
July 20, 2004

Adopted 22 Mar 04

56th Civil Engineer Squadron
Wood Shop
Located at Luke Air Force Base

Permit No. 8602890

Cyclone
Building 339

Operation and Maintenance Plan

Prepared by 56 CES Air Program Manager

HEALTH, SAFETY AND ENVIRONMENTAL
March 2004

Table of Content

Attachments:

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
July 20, 2004

Sample Maintenance Log

OPERATION AND MAINTENANCE PLAN
FOR
Cyclone Dust Collection System

I GENERAL INFORMATION

Business Name: 56 Fighter Wing

Business Address: Bldg 339, Luke Air Force Base, Arizona 85309-1149

Permit Number: 8602890

Date of Preparation/Revision: 22 Mar 04

General description of overall facility operations: Training aircrew and maintenance personnel on the F-16 aircraft

Brief description of process(es) ducted to control device including pollutants emitted: Carpentry shop is responsible for facility maintenance and repair.

Complete description of control device(s) covered by the plan including manufacturer, model, rated capacity, total number of identical units, equipment identification number, etc.:

1. Skimmer Dust Removal System
   Size # 16/ Serial # S730261
   Manufacture: American Air Filter
   Louisville, KY

2. Induction A/C Motor
   Model # SKE256BC205B H/P: 20
   Manufacture: General Electric Systems
   Fort Wayne, IN

II OPERATIONS PLAN

Daily PM
Weekly PM
Semiannual PM
Annual PM

III MAINTENANCE PLAN

DAILY

1. Check dust storage unit, empty if ¾ full

WEEKLY

1. During operations check for visual emissions
2. Empty the dust storage containing unit

SEMIANNUAL

1. Check the security of all ductwork, looking for loose and missing hardware or holes

ANNUAL

1. Lubricate/grease moving parts on electric motor and hopper
2. Replace belts as needed

NOTES: Records are required to be maintained for a minimum of five years.

IV TRAINING REQUIREMENTS

Training is conducted al all new airman and civilian shop personnel during the initial shop orientation.

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
July 20, 2004

Adopted 22 Mar 04

Det 1, 4444 Ops
Wood Shop
Located at Luke Air Force Base

Permit No. 8602890

Cyclone
Building 415

Operation and Maintenance Plan

Prepared by 56 CES Air Program Manager

HEALTH, SAFETY AND ENVIRONMENTAL
March 2004

Table of Content

Attachments:

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
July 20, 2004

Sample Maintenance Log

OPERATION AND MAINTENANCE PLAN
FOR
Wood Dust Collector

I GENERAL INFORMATION

Business Name: 56 Fighter Wing

Business Address: Bldg 415, Luke Air Force Base, Arizona 85309-1149

Permit Number: 8602890

Date of Preparation/Revision: 22 Mar 04

General description of overall facility operations: Training aircrew and maintenance personnel on the F-16 aircraft

Brief description of process(es) ducted to control device including pollutants emitted: The dust collector removes wood dust created at the source of all our wood working machines and collects it into an outside hopper

Complete description of control device(s) covered by the plan including manufacturer, model, rated capacity, total number of identical units, equipment identification number, etc.:

CYCLO-MAX model # C3625-H65-24

II. OPERATIONS PLAN

Daily PM
Weekly PM
Semiannual PM
Annual PM

III MAINTENANCE PLAN

DAILY

1. Ensure all blast gates operate when individual machines are turned on.
2. Check and empty hopper if ¾ full.

WEEKLY

1. Empty hopper weekly.
2. Weekly during operations a visual inspection will be performed to ensure no visual emissions are coming from the unit.

SEMI-ANNUALLY

3. Inspect belts and replace as needed.

ANNUALLY

1. Inspect all duct work for leaks.
2. Lubricate bearings.

IV TRAINING REQUIREMENTS

All new personnel are trained on the Dust collector usage and safety upon arrival to the unit. This training is documented in the worker's AF Form 55.

Luke Air Force Base
56 CES/CEVC
13970 W. Lightning Street
Permit Number V97-017
July 20, 2004

Adopted 22 Mar 04
Approved 10 Jun 04

56th Equipment Maintenance Squadron
Fabrication Flight
Corrosion Control

Located at Luke Air Force Base

Permit No. 8602890

SPRAY PAINT BOOTH

Building 922

Operation and Maintenance Plan

Prepared by 56 EMS Fabrication Flight, Unit Environmental Coordinator, and 56 CES Air Program Manager

HEALTH, SAFETY AND ENVIRONMENTAL
March 2004

Table of Content

Attachments:

- Sample Manometer Log

OPERATION AND MAINTENANCE (O&M) PLAN

I. GENERAL INFORMATION

Business Name: 56 Fighter Wing

Business Address: Bldg 922E and 922W, Luke Air Force Base, Arizona 85309-1149

Permit Number: 8602890

Date of Preparation/Revision: 22 Mar 04

General description of overall facility operations: Training aircrew and maintenance personnel on the F-16 aircraft

Brief description of process(es) ducted to control device including pollutants emitted: Paint overspray and VOC's

Complete description of control device(s) covered by the plan including manufacturer, model, rated capacity, total number of identical units, equipment identification number, etc.:

2 - JBI Spray Booths, Industrial Dry Type, Model: TDB-6816-S

2 -2 Control Instruments Corporation Model: DATAMAX 4000

II OPERATIONS PLAN

Daily PM.
Weekly PM.
Monthly PM

III MAINTENANCE PLAN

Inspect filters for rips, tears, or sags	Daily
Check and annotate manometer reading.	Weekly
Manomater should read between 0.1 and 2.6 inches of water.	Weekly
Pauli System is contracted to perform preventative maintenance monthly and filter changes as required to include the following:	Monthly

Testing charcoal filters for absorption efficiency
Check and replace door seals as required
Check gas levels on flame ionization

NOTES: Records are required to be maintained for a minimum of five years.

IV Training Requirements

Personnel will be brief on the operation and maintenance of equipment upon arrival to this duty location to include VOC record keeping requirements and proper paint application methods.